



TRUCKEE MEADOWS WATER AUTHORITY
Board of Directors

AGENDA

Wednesday, August 16, 2023 at 10:00 a.m.
Sparks Council Chambers, 745 4th Street, Sparks, NV

Board Members

Chair Kristopher Dahir
Paul Anderson
Clara Andriola
Jenny Brekhus

Vice Chair Naomi Duerr
Alexis Hill
Devon Reese

NOTES:

1. The announcement of this meeting has been posted at the following locations: Truckee Meadows Water Authority (1355 Capital Blvd., Reno), Sparks City Hall (431 Prater Way, Sparks), at <http://www.tmwa.com>, and State of Nevada Public Notice Website, <https://notice.nv.gov/>.
2. In accordance with NRS 241.020, this agenda closes three working days prior to the meeting. We are pleased to make reasonable accommodations for persons who are disabled and wish to attend meetings. If you require special arrangements for the meeting, please call (775) 834-8002 at least 24 hours before the meeting date.
3. Staff reports and supporting material for the meeting are available at TMWA and on the TMWA website at <http://www.tmwa.com/meeting/>. Supporting material is made available to the general public in accordance with NRS 241.020(6).
4. The Board may elect to combine agenda items, consider agenda items out of order, remove agenda items, or delay discussion on agenda items. Arrive at the meeting at the posted time to hear item(s) of interest.
5. Asterisks (*) denote non-action items.
6. Public comment is limited to three minutes and is allowed during the public comment periods. The public may sign-up to speak during the public comment period or on a specific agenda item by completing a "Request to Speak" card and submitting it to the clerk. In addition to the public comment periods, the Chairman has the discretion to allow public comment on any agenda item, including any item on which action is to be taken. Public comment may be provided by submitting written comments online on TMWA's Public Comment Form (tmwa.com/PublicComment) or by email sent to boardclerk@tmwa.com prior to the Board opening the public comment period during the meeting. In addition, public comments may be provided by leaving a voicemail at (775)834-0255 prior to 4:00 p.m. the day before the scheduled meeting. Voicemail messages received will be noted during the meeting and summarized for entry into the record. Public comment is limited to three minutes and is allowed during the public comment periods. The Board may elect to receive public comment only during the two public comment periods rather than each action item.
7. In the event the Chairman and Vice-Chairman are absent, the remaining Board members may elect a temporary presiding officer to preside over the meeting until the Chairman or Vice-Chairman are present (**Standing Item of Possible Action**).
8. Notice of possible quorum of Western Regional Water Commission: Because several members of the Truckee Meadows Water Authority Board of Directors are also Trustees of the Western Regional Water Commission, it is possible that a quorum of the Western Regional Water Commission may be present, however, such members will not deliberate or take action at this meeting in their capacity as Trustees of the Western Regional Water Commission.

1. Roll call*
2. Pledge of allegiance*
3. Public comment — limited to no more than three minutes per speaker*
4. Possible Board comments or acknowledgements*

¹The Board may adjourn from the public meeting at any time during the agenda to receive information and conduct labor-oriented discussions in accordance with NRS 288.220 or receive information from legal counsel regarding potential or existing litigation and to deliberate toward a decision on such matters related to litigation or potential litigation.

5. Approval of the agenda **(For Possible Action)**
6. Approval of the minutes of the June 21, 2023 meeting of the TMWA Board of Directors **(For Possible Action)**
7. Discussion and action, and possible direction to staff regarding funding plan and proposed rate adjustments — Matt Bowman **(For Possible Action)**
8. Discussion and action, and possible direction to staff regarding potential debt restructure through a cash optimization — Matt Bowman **(For Possible Action)**
9. Update and presentation on the Truckee River Basin Water Management Options Pilot Study project — Bill Hauck*
10. General Manager's Report*
11. Public comment — limited to no more than three minutes per speaker*
12. Board comments and requests for future agenda items*
13. Adjournment **(For Possible Action)**

¹The Board may adjourn from the public meeting at any time during the agenda to receive information and conduct labor-oriented discussions in accordance with NRS 288.220 or receive information from legal counsel regarding potential or existing litigation and to deliberate toward a decision on such matters related to litigation or potential litigation.

TRUCKEE MEADOWS WATER AUTHORITY
DRAFT MINUTES OF THE JUNE 21, 2023
MEETING OF THE BOARD OF DIRECTORS

The Board of Directors met on Wednesday, June 21, 2023 at Sparks Council Chambers. Vice Chair Dahir called the meeting to order at 10:35 a.m.

1. ROLL CALL

Directors Present: Paul Anderson, Jenny Brekhus, Kristopher Dahir, Naomi Duerr, Alexis Hill, Devon Reese, and Alternate Mariluz Garcia.

Directors Absent: Clara Andriola

A quorum was present.

2. PLEDGE OF ALLEGIANCE

The pledge of allegiance was led by Alternate Garcia.

3. PUBLIC COMMENT

There was no public comment.

4. POSSIBLE BOARD COMMENTS OR ACKNOWLEDGEMENTS

Vice Chair Dahir welcomed TMWA's new Board Counsel, Justina Caviglia from Parsons, Behle & Latimer.

5. APPROVAL OF THE AGENDA

Upon motion by Director Anderson, second by Director Duerr, which motion duly carried by unanimous consent of the Directors present, the Board approved the agenda.

6. APPROVAL OF THE MINUTES OF THE MAY 18 2023 MEETING

Upon motion by Director Anderson, second by Director Duerr, which motion duly carried by unanimous consent of the Directors present, the Board approved the May 18, 2023 minutes.

7. RECOGNITION AND MEMORIAM OF GENO MARTINI, FORMER CHAIR OF THE TMWA BOARD OF DIRECTORS

Andy Gebhardt, TMWA Director of Distribution, remembered Geno Martini, a friend, who was on the TMWA Board between 2005-2018, his commitment to the community, and support of TMWA and staff.

Vice Chair Dahir thanked Mr. Gebhardt for his comments and noted there is a service this Saturday at the Rock Church in Sparks which is open to the public.

Director Hill agreed that Mayor Martini will be remembered for how unique he made people feel and was a great mentor to her.

Director Duerr added that he was a great force in the community and on the boards he served.

8. PRESENTATION BY THE NATURE CONSERVANCY

Kara Steeland, TMWA Senior Hydrologist & Watershed Coordinator, introduced Mauricia Baca, State Director, Chris Segal, Stewardship Manager, and Heather Giger, Director for Protection and Stewardship Strategies, from The Nature Conservancy (TNC). TNC protects the Truckee River watershed, own and manage the land around Independence Lake, and is one of our co-partners in the newly formed middle Truckee River watershed forest health partnership.

Ms. Baca, Mr. Segal, and Ms. Giger presented on TNC's programs in the Truckee River watershed and collaboration with TMWA related to Independence Lake and forest management.

Members of the Board inquired if there was any more they could do to support their efforts (for the Board to continue supporting staff efforts is greatly appreciated), if TNC knew of the Truckee Meadows Regional Planning Agency's (TMRPA's) drafting of a conservation plan and recommendation for the two agencies to connect (Ms. Baca replied she was not aware of the plan and would be willing to share their science and work with partner agencies), if Independence Lake would be open to the public this summer (yes, the watercraft program will open by July 4th and the preserve and trails are always open), and requested if there was an opportunity to visit Independence Lake, or other projects, to let them know.

9. DISCUSSION AND POSSIBLE APPROVAL OF CHANGES TO TMWA BOARD BYLAWS

John Zimmerman, TMWA General Manager, presented the amended TMWA Board Bylaws, requested by the Board at the May meeting, for their review and approval.

Discussion followed regarding keeping the meeting time general (so long as the time is noted on the agenda) and alternating the chair and vice chair on an annual basis rather than every two years.

Upon motion by Director Reese, second by Director Duerr, which motion duly carried by unanimous consent of the Directors present, the Board approved staff recommended amendments to the bylaws and added the ability for the Board to meet monthly and flexibility and require an annual rotation of the chair and vice chair, effective immediately.

10. DISCUSSION AND ACTION ON NOMINATION AND ELECTION OF CHAIR AND VICE CHAIR AND REQUEST FOR BOARD ADOPTION OF RESOLUTION NO. 317 APPOINTING A CHAIR AND VICE CHAIR FOR FISCAL YEAR 2024

Mr. Zimmerman presented the staff report for Board consideration.

Director Brekhus stated she could not support the motion and suggested she be in the line of succession for Chair.

Vice Chair Dahir said he supported the nomination and appreciated Director Brekhus' comments.

Upon motion by Director Hill, second by Alternate Garcia, which motion duly carried six to one with Director Brekhus dissenting, the Board adopted Resolution No. 317: A resolution appointing Kristopher Dahir as Chair for Fiscal Year 2024.

Upon motion by Director Hill, second by Alternate Garcia, which motion duly carried six to one with Director Brekhus dissenting, the Board adopted Resolution No. 317: A resolution appointing Naomi Duerr as Vice Chair for Fiscal Year 2024.

11. DISCUSSION AND ACTION CONFIRMING GENERAL MANAGER'S APPOINTMENT OF PETER PRIBYL AS TRUSTEE TO FILL THE REMAINING TERM OF RICHARD MERRIGAN TO THE §501-C-9 POST-RETIREMENT MEDICAL PLAN & TRUST ENDING ON DECEMBER 31, 2024

Jessica Atkinson, TMWA Human Resources Director, presented the staff report.

Upon motion by Director Reese, second by Director Anderson, which motion duly carried by unanimous consent of the Directors present, the Board approved the General Manager's Appointment of Peter Pribyl as trustee to fill the remaining term of Richard Merrigan to the §501-c-9 Post-Retirement Medical Plan & Trust ending on December 31, 2024.

12. PRESENTATION OF RESULTS OF 2023 LEGISLATIVE ACTIVITIES AND BILLS

Stefanie Morris and Leo Drozdoff updated the Board on the legislative session, status of bills (passed and failed to pass): tracked 120 Bill Draft Requests (BDRs), 89 of which became bills, 40 died, and 11 vetoed.

Discussion followed regarding key bills: AB 261 (maximize efficient use of water resources and encourage conservation) has been signed by the Governor is law; AB 387 (groundwater conjunctive management proposed by the State Engineer) staff worked with the bill sponsor in amending the language, but it did not pass; and SB 11 (regarding the purchase and use of drones) passed as amended and since TMWA uses drones for some their projects, staff will be tracking the regulation.

120 BDRs and 89 became bills: 40 died, 11 vetoed one was pending AB261 but now signed by Gov and is law; 39 passed. SB11 regarding use of drones, TMWA uses drones for some of their projects, and will be tracking the regulation. AB387, groundwater conjunctive management proposed by the SE, staff worked with amending the language, but did not pass.

Mr. Drozdoff added 75 bills were vetoed by the Governor, which is a record, and in regards to AB 387, staff will have opportunities to participate in discussions as it pertains to conjunctive management.

Ms. Morris thanked the chair and board members for their support during the session.

Vice Chair Duerr thanked Ms. Morris and Mr. Drozdoff for their expertise and enjoyed working with them, and asked for a summary of water bills passed. Ms. Morris replied she can provide a summary of all key bills to the Board.

13. PRESENTATION OF Q3 FINANCIALS FOR FISCAL YEAR 2023

Matt Bowman, TMWA Chief Financial Officer, presented the Q3 financials for fiscal year 2023: the change in net position was \$26.3m (45%) lower than budget which was driven by lower operating revenues and lower connection fees; operating revenue was \$2.0m (2%) lower than budget which was driven by lower water sales; operating expenses were \$2.1m (2%) lower than the augmented budget; nonoperating expenses were \$0.7m (10%) lower than budgeted related to loss on disposal of assets; and capital contributions were \$27.0m (45%) lower than budget driven by lower contributions from connection fees and other governments related to the American Flat Advanced Purified Water project.

Director Brekhus asked about the rate hike schedule, slow down of capital contributions and rethinking of the related position add-ons, and OneWater commitments and breakdown. Mr. Bowman replied the last of five scheduled rate increases happened this month, and staff is currently in the process of developing a rate plan, as for staffing, they did add a construction engineer manager, but deferred a planning engineer, the OneWater commitments are included in the CIP and the project will be funded by connection fees, water resource stability fund, and future water rights sales and modeling is flexible.

Chair Dahir asked about the rate stabilization fund. Mr. Bowman replied the definition and requirements of use set by the Board allows for flexibility of use and as staff develops the rate plan they will consider use of the fund for periods of lower revenues to level out the rate plan over the years.

14. DISCUSSION AND POSSIBLE AUTHORIZATION FOR GENERAL MANAGER TO SIGN A CONTRACT BETWEEN TMWA AND WASHOE COUNTY REGARDING PUBLIC FIRE HYDRANT MAINTENANCE

Mr. Gebhardt presented the staff report and agreement for Board approval.

Director Duerr asked how many additional employees will be added. Mr. Gebhardt replied four additional employees bringing it to 16 employees for the entire fire hydrant maintenance program.

Director Hill expressed she was pleased with the agreement and noted the Washoe Board of County Commissioners also approved the agreement at their meeting yesterday.

Upon motion by Director Hill, second by Alternate Garcia, which motion duly carried by unanimous consent of the Directors present, the Board approved the authorization for General Manager to sign a contract between TMWA and Washoe County regarding public fire hydrant maintenance.

15. GENERAL MANAGER’S REPORT

Mr. Zimmerman noted that Lake Tahoe is about one foot from maximum capacity, recommended keeping the July meeting on calendar for now, but that it would most likely be canceled, and invited the Board to TMWA’s annual picnic on Saturday, August 12th from 11am to 3pm at Verdi Hydro Park. He also thanked The Nature Conservancy for their presentation and recognized Kara Steeland who has assumed the role of watershed coordinator.

Chair Dahir noted he will be traveling over the July Board meeting date and highly encouraged Board Members to attend the picnic, which is a great event, and show support to employees. He also suggested they take a Board photo around 12pm.

Director Brekhus inquired about Fish Springs and change of ownership if there was any change in the status of annexation. Mr. Zimmerman replied no, they have not seen much change in operations.

16. PUBLIC COMMENT

There was no public comment.

17. BOARD COMMENTS AND REQUESTS FOR FUTURE AGENDA ITEMS

There were no Board comments.

18. ADJOURNMENT

With no further discussion, Chair Dahir adjourned the meeting at 12:04 p.m.

Approved by the TMWA Board of Directors in session on _____.

Sonia Folsom, Board Clerk.



STAFF REPORT

TO: Board of Directors
THRU: John R. Zimmerman, General Manager
FROM: Matt Bowman, CFO
DATE: August 8, 2023
SUBJECT: **Discussion and action, and possible recommendation to TMWA staff regarding funding plan and proposed rate adjustments**

Recommendation

Based on the results of TMWA's most recent funding plan, staff recommends the Board approve rate increases of 4.5%, 4.0%, and 3.5% in fiscal years 2024, 2025 and 2026, respectively, followed by annual review and possible Board approval of CPI-based increases in future fiscal years. Staff's recommendation includes some use of the Rate Stabilization Fund in lieu of higher rate increases. These adjustments are necessary to maintain TMWA's solid financial health including meeting all bond covenants and Board policies and excellent credit ratings. While staff is asking for approval of these rate increases now, the first and second hearings will not occur until December 2023 and January 2024, respectively, and after public outreach efforts are completed.

Discussion

Working with TMWA's financial advisors, PFM, TMWA Staff completed a 10-year financial forecast (funding plan) based on the most recent and relevant information available. The funding plan includes projections for customer water use, TMWA operating expenses, capital expenditures and connection fees. The funding plan indicates the need for future rate adjustments. We believe these adjustments, along with some use of the Rate Stabilization Fund, are prudent and necessary to maintain TMWA's financial goals and excellent credit ratings and are balanced against the relative affordability of TMWA's existing water rates.

First, TMWA's Board established financial guidelines of maintaining a minimum of 1.50x debt service coverage on TMWA's senior lien debt. This target provides adequate resources to fund a portion of capital projects from current year revenues and helps mitigate financial risk. Second, TMWA's Board established an unrestricted cash minimum to further mitigate significant and unexpected financial burdens, whether from a loss of revenue or increase of unavoidable expenses. The proposed rate adjustments are required for TMWA to meet both criteria. Lastly, TMWA is evaluated annually by three credit rating agencies who consider the financial health of the organization and determine a rating. Both of the guidelines established by the TMWA Board

and noted above are in line with the criteria considered by the credit rating agencies. These ratings are important for TMWA to maintain as it offers another risk mitigation in the way of access to capital markets and more attractive interest rates. TMWA's excellent financial ratings are also important to the public and rate payers as an independent validation of TMWA's financial health and management.

As a baseline, Staff modeled 10 years of financials with no rate adjustments. This model shows without rate adjustments, all-in Debt Service Coverage (DSC) ratio never meets 1.50x coverage and falls below the minimum required by debt covenants of 1.25x in FY 2026. Additionally, cash balance decreases each year, falling below the minimum in FY 2027.

Staff modeled numerous scenarios, but ultimately recommends the Board consider the two scenarios presented below.

Scenario A – 5.25%, 4.0% and 3.5% increase in FYs 2024, 2025 and 2026 and CPI based thereafter **No rate stabilization fund used*

- Lowest all-in DSC (after FY 2024) 1.50x (FY 2025)
- Lowest unrestricted cash balance \$116m (FY 2028)
- Unrestricted cash compared to minimum required \$3.8m (FY 2028)

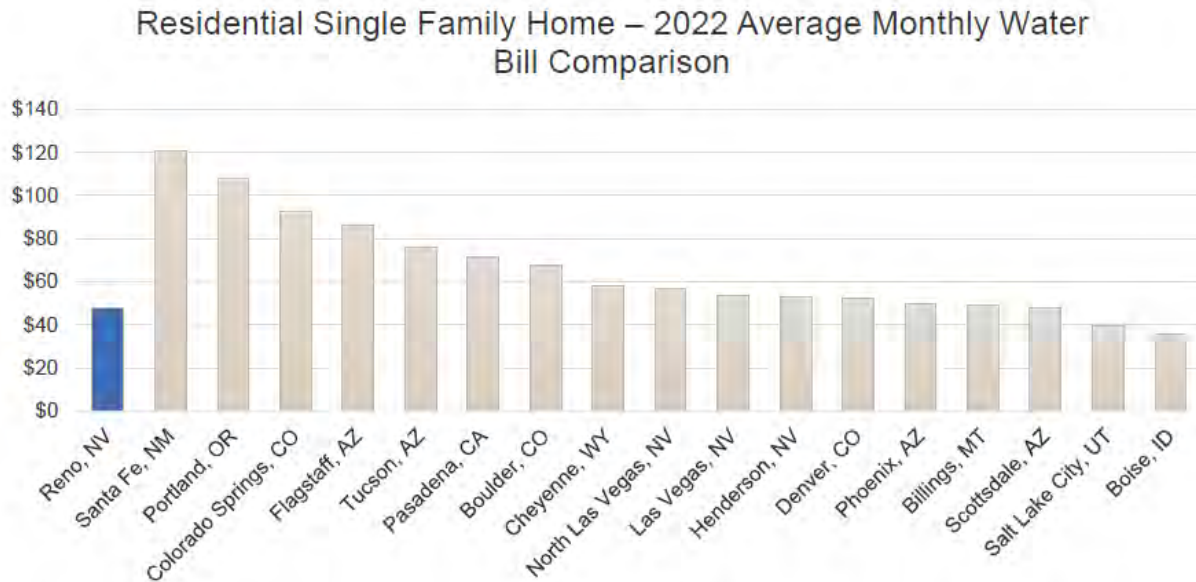
Scenario B – 4.5%, 4.0% and 3.5% increase in FYs 2024, 2025 and 2026 and CPI based thereafter (*recommended*) **Rate Stabilization Fund used*

- Lowest all-in DSC 1.50x (FY 2024)
- Lowest unrestricted cash balance \$112.0m (FY 2028)
- Unrestricted cash compared to minimum required **-\$0.3m** (FY 2028)

DSC includes use of proceeds from Rate Stabilization Fund of \$3.75m, \$1.0m in FYs 2024 and 2025, replenished in FYs 2026-2028

Staff considered using more of the Rate Stabilization Fund to achieve lower rate increases. This modeling showed that for every \$1m of additional Rate Stabilization Fund proceeds used, each of the three years' rate increases could be reduced by one quarter of a percent (0.25%) to continue to achieve a 1.50x DSC ratio in each year. The modeling shows that for every 0.25% reduction in rate increases, it would lower the median residential customer's bill by approximately fifteen cents (\$0.15) each month. Additionally, using more from the Rate Stabilization Fund than Scenario B, increases financial risk for TMWA until the fund is replenished, which would occur in FY 2028 or later. For these reasons, Staff recommends not using more from the Rate Stabilization Fund than what is presented in Scenario B above.

To assess the affordability of these rate adjustments, Staff compared current water rates to those of other similar sized utilities in the western U.S. The chart below shows TMWA as compared to these entities.



Further, to offer perspective on the impact of the proposed adjustments to the median TMWA customer, the recommended scenario (B) results in the following additional charges per month.

Rate Increase	FY 2024		FY 2025		FY 2026		Total	
	4.50%		4.00%		3.50%			
Season	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer
Residential	\$1.24	\$2.56	\$1.16	\$2.38	\$1.05	\$2.17	\$3.45	\$7.11
Multi-Family	\$2.09	\$2.80	\$1.94	\$2.60	\$1.77	\$2.36	\$5.80	\$7.76
Commercial	\$1.49	\$2.46	\$1.38	\$2.28	\$1.26	\$2.08	\$4.13	\$6.81

Following Board direction, TMWA Staff would begin the public outreach process. The proposed timeline for this and the ultimate approval and implementation of the rate adjustments is presented below.

Proposed timeline

August 2023

- Board approval of funding plan and rate adjustments

September – November 2023

- Public open houses
- Updates to BOD and SAC as needed

December 2023

- Recap and discussion of public outreach process
- Public hearing – first reading

January 2024

- Public hearing – second reading and adoption of rate adjustments

June 2024

- Implementation of rate adjustment

Recommended Motion

Move to approve the proposed rate plan and public outreach timeline as recommended by Staff.



pfm

Truckee Meadows Water Authority

Revenue Sufficiency Study

PFM Financial Advisors LLC and Hobbs, Ong & Associates

August 16, 2023

Thomas Toepfer
(206) 858-5360

Elli Halperin
(206) 858-5364



Outline

TRUCKEE MEADOWS WATER AUTHORITY

- I. Overview of TMWA
- II. Revenue and Expense Structure
- III. Base Case Revenue and Cost Drivers
- IV. Financial Health: Covenants, Reserves, and Credit Rating
- V. Affordability
- VI. Projections without Rate Adjustments
- VII. Scenarios

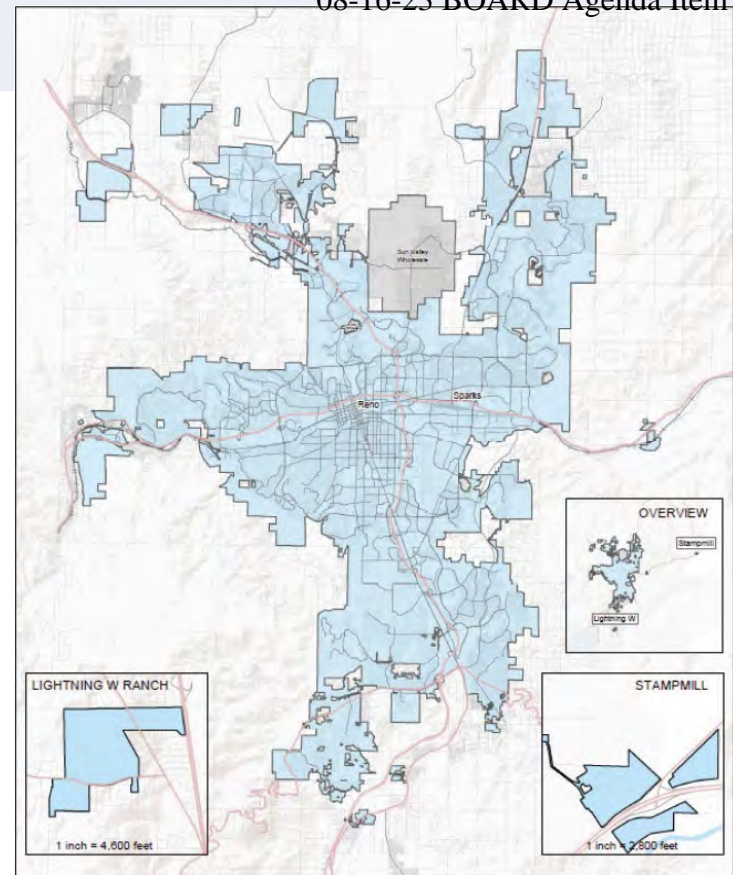


I. Overview of TMWA



Authority Description

- TMWA's service area has experienced steady growth since its inception in 2001
 - Washoe County's population has grown nearly 40% in 20 years to over 493,000 in 2021
- The Authority manages its water supply and distribution network with key negotiations and acquisitions
 - Primary signatory of the Truckee River Operating Agreement (TROA), where in any given year as much as 80% of the service area's water is supplied
 - Owns and operates 27,000 acre-feet of Privately Owned Stored Water (POSW) reservoir
 - As of June 30, 2022, TMWA has approximately 40,000-acre feet stored in TMWA owned and federally operated reservoirs





Number of Accounts

- TMWA has over 135,000 service connections and two wholesale customers
- TMWA's largest wholesale customer, the Sun Valley General Improvement District (SVGID) is located north of the Reno-Sparks main metropolitan area
 - SVGID is wholly dependent upon TMWA water deliveries since this district has no source of water supply
 - There is one water delivery contract associated with this wholesale connection

FY 2022 Customer and Water Sales by Category				
	Avg. Number of Accounts	% of Total Accounts	FY Water Revenues ⁽¹⁾	% of Total Revenues
Residential unmetered	640	0.47%	\$2,730,559	2.52%
Residential metered	123,700	91.74%	\$77,184,825	71.35%
Commercial metered	6,967	5.17%	\$12,587,162	11.64%
Other ⁽²⁾	3,535	2.62%	\$14,408,203	13.32%
Wholesale	2	-	\$1,262,221	1.17%
Total	134,844	100.00%	\$108,172,970	100.00%

- (1) Water Revenues are revenues that are billed and estimated for the fiscal year periods. Estimated revenues are revenues for water deliveries just prior to fiscal year end that are unbilled until July of the next fiscal year.
- (2) Includes non metered private fire protection services located on the premises of commercial and some residential customers.

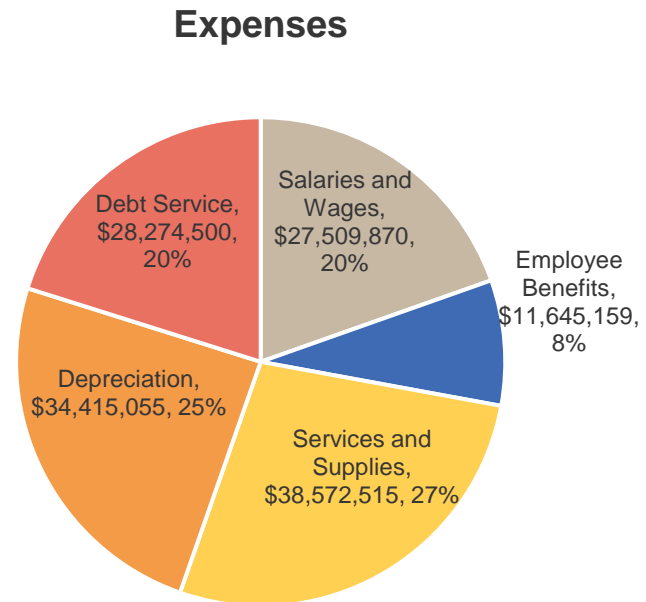
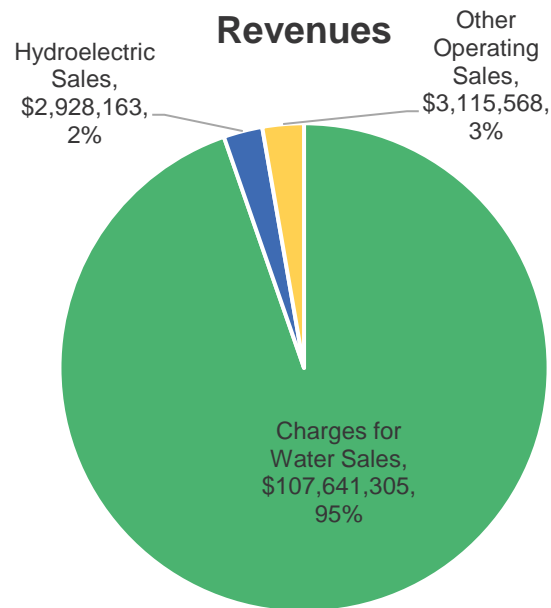


II. Revenue and Expense Structure



Revenue and Expense Composition – FY 2023 Preliminary⁽¹⁾

- Variable Revenues: TMWA's revenues are highly depended on water deliveries and are therefore subject to changes in water consumption
- Approximately 20% of expenses are fixed (debt service) while other expenses are quasi fixed
 - Minimum staffing levels, supplies, repairs and reinvestments are necessary to operate the system



(1) Does not include connection charge revenues and growth-related expenditures



III. Base Case Revenue and Cost Drivers



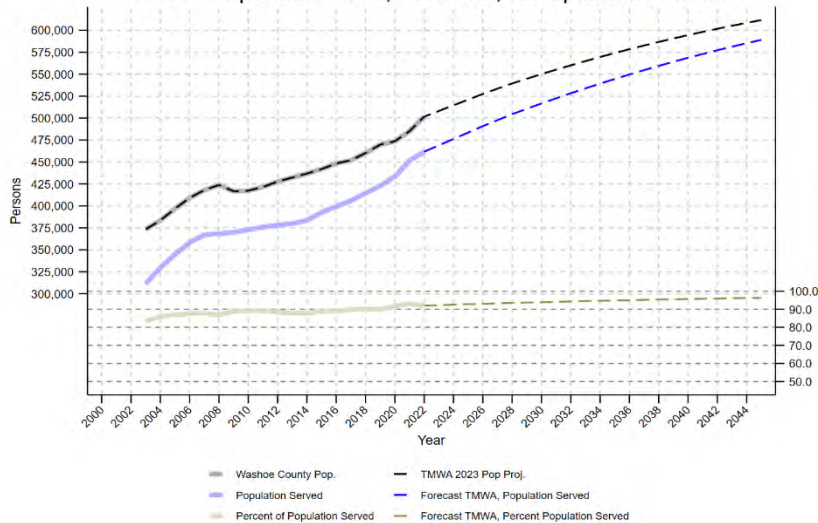
Base Case Revenue Driver – Population

- Based on the TMWA's 2023 population projections, the annual percent change in total water sale revenue is shown as in the table below, assuming no change in per capita water consumption

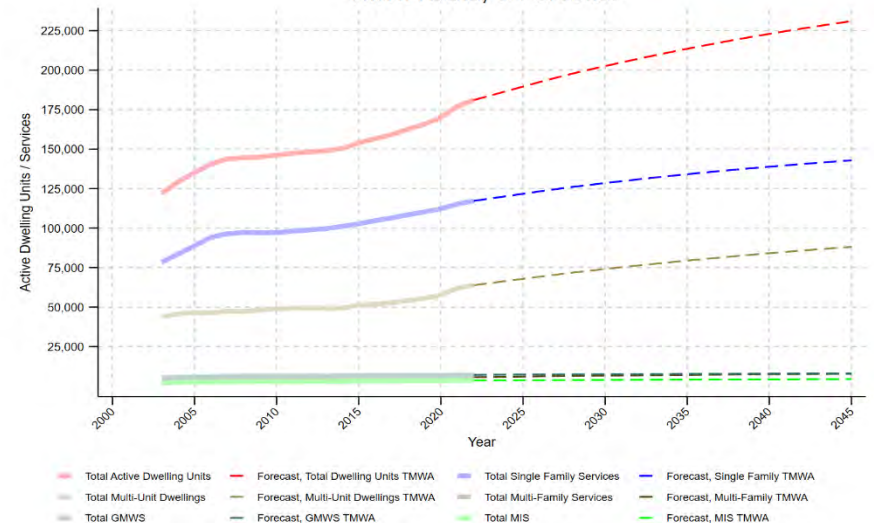
Change in Projected Revenue based on TMWA's 2023 Population Projections

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032
Annual % Change in Projected Revenue	1.28%	1.17%	1.15%	1.09%	1.05%	0.99%	0.91%	0.90%	0.84%

TMWA Population Data, Forecast, & Population Served



TMWA Data, & Forecast





Base Case Cost Driver – Inflation and Increased Staffing Levels

- The Authority assumes increasing staffing levels and inflation adjustments for salaries, wages, and benefits
- Services and supplies increases are assumed to be managed to annual increase at or below 2%

		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
<i>Salaries, Wages, and Benefits</i>	Salaries and Wages	\$28,932,525	\$32,321,778	\$34,814,005	\$36,027,091	\$37,340,969	\$38,167,064	\$39,132,127	\$40,095,746	\$41,048,731	\$42,005,973
	Benefits	13,235,769	14,733,112	15,871,821	16,509,480	17,197,828	17,782,603	18,451,628	19,143,236	19,854,311	20,319,462
	Total	\$42,168,294	\$47,054,890	\$50,685,826	\$52,536,571	\$54,538,797	\$55,949,667	\$57,583,755	\$59,238,982	\$60,903,042	\$62,325,435
	Annual increase		11.59%	7.72%	3.65%	3.81%	2.59%	2.92%	2.87%	2.81%	2.34%
<i>Services and Supplies</i>	Services and supplies costs	\$41,279,090	\$41,514,134	\$42,266,993	\$43,034,104	\$43,815,743	\$44,692,058	\$45,585,899	\$46,497,617	\$47,427,569	\$48,376,121
	Annual increase		0.57%	1.81%	1.81%	1.82%	2.00%	2.00%	2.00%	2.00%	2.00%



Base Case Cost Driver – Capital Investments

- Based on historical capital expenditures and planned capital projects, TMWA estimated the following capital expenditures for customer funded projects for fiscal years 2024 -2026

Projected Capital Expenditures

	FY 2024	FY 2025	FY 2026
Capital Expenditures	\$27,720,900	\$32,252,000	\$30,420,000

- Beyond FY 2026, the funding plan assumes capital expenditures at the level of projected annual depreciation

Forecasted Depreciation Expense

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033
Depreciation expense	\$35,460,610	\$35,992,519	\$36,532,407	\$37,080,393	\$37,636,599	\$38,201,148	\$38,774,165	\$39,355,778	\$39,946,114	\$40,545,306
Dollar change	-	\$531,909	\$539,888	\$547,986	\$556,206	\$564,549	\$573,017	\$581,612	\$590,337	\$599,192
Percent change	-	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%



Historical Results: Operating Expenses Growth

- Operating expenses have increased more than the annual rate increases
- Preliminary fiscal year end 2023 estimates show an operating expense increase of 12% compared to FY 2022 due to high inflation affecting power cost, supplies and wages.

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Salaries and Wages	\$18,735,892	\$20,973,151	\$21,455,982	\$23,101,987	\$24,735,686	\$27,509,870
<i>Change from Prior Year (\$)</i>		\$2,237,259	\$482,831	\$1,646,005	\$1,633,699	\$2,774,184
<i>Change from Prior Year (%)</i>		11.94%	2.30%	7.67%	7.07%	11.22%

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Services and Supplies	\$25,835,318	\$28,475,960	\$27,808,959 ⁽¹⁾	\$30,562,803	\$32,768,771	\$38,572,515
<i>Change from Prior Year (\$)</i>		\$2,640,642	(\$667,001)	\$2,753,844	\$2,205,968	\$5,803,744
<i>Change from Prior Year (%)</i>		10.22%	(2.34%)	9.90%	7.22%	17.17%

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Historical Rate Increases	3.00%	-	-	2.50%	2.50%	2.50%

(1) FY 2020 spending was lower than FY 2019 primarily due to one-time expenses incurred in FY 2019

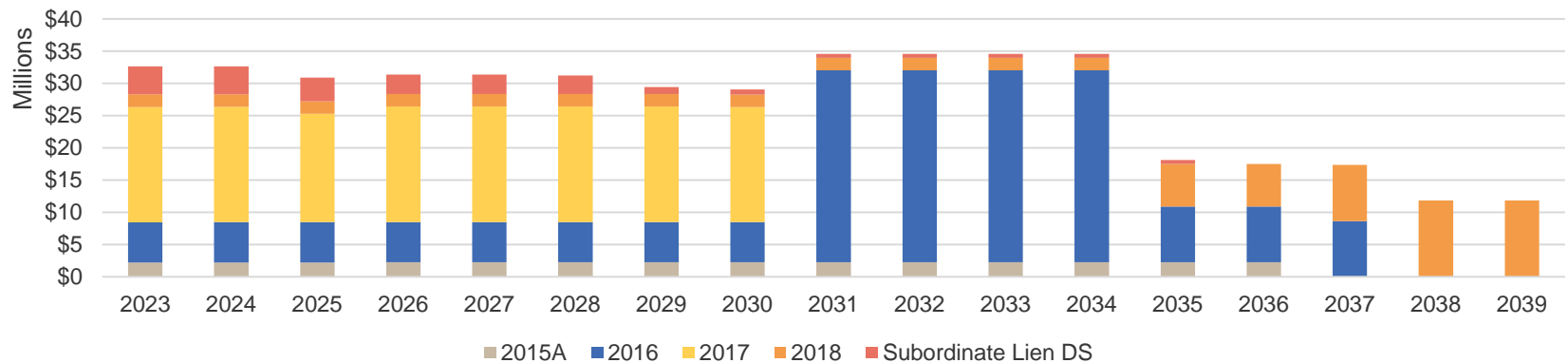


Base Case Cost Driver – Debt Service

- As of July 1, 2023, TMWA has approximately \$300.6 million in long-term outstanding debt, as well as \$21.4 million in subordinate lien direct borrowings

Series	Purpose	Issue Size	Delivery Date	Final Maturity	Call Date	Outstanding Coupons	Outstanding Par
Series 2015A	To refund certain 2005A maturities	\$28,750,000	4/9/2015	7/1/2036	7/1/2025	5.00%	\$22,240,000
Series 2016	To refund certain Series 2006 maturities	124,790,000	3/23/2016	7/1/2037	7/1/2026	5.00%	124,790,000
Series 2017	To refund certain Series 2007 maturities	147,415,000	3/9/2017	7/1/2030	7/1/2027	5.00%	114,725,000
Series 2018	To refund Series 2006A and a portion of outstanding 2006B maturities	38,835,000	4/25/2018	7/1/2039	7/1/2028	5.00%	38,835,000
Total							\$300,590,000

Aggregate Debt Service





IV. Financial Health: Covenants, Reserves, and Credit Rating



Bond Covenants – Legal Requirements

In order to avoid a default, TMWA must comply with its bond covenants.

Rate Maintenance Covenant:

TMWA covenanted to bondholders to maintain rates such that gross revenues after payment of operation and maintenance expenses in that fiscal year is at least

- **1.25x** the debt service of senior/superior lien debt, and at least
- **1.00x** the debt service of all debt

Minimum Reserves:

- Maintain a minimum Operation and Maintenance Reserve of 1/6th of a fiscal years O&M budget (approx. 61 days cash on hand)
- Maintain a minimum Renewal and Replacement Account of \$2 million (max of \$10 million)
- Maintain a minimum Rate Stabilization Account of \$0.5 million



Reserve Funding – Bond and Policy Requirements

Restricted Reserves	Projected Balance as of June 30, 2023
• Operations and Maintenance Expenses Account: One sixth of O&M expenses	\$13,511,926
• Renewal and Replacement Reserve: \$166,000 per month, to a max of \$10,000,000; no less than \$2,000,000	\$10,000,000
• Rate Stabilization Fund: 3% of water sales revenues for 3 years; no less than \$500,000	\$10,428,982
Total Restricted Reserves	\$33,940,908
Designated Unrestricted Reserves	
• Operating and Maintenance Reserve: Equal to 2/6 of the fiscal years O&M budget	\$27,023,852
• Capital Related Reserve: A one year average of mandatory future capital requirements	\$30,011,000
• Unforeseen Events Reserve: 1% of depreciable assets	\$14,209,663
• Bond Debt Service Reserve: One year of maximum annual debt service	\$34,615,982
Total Designated Reserves (Policy Requirements)	\$105,860,497
Total Reserves	\$139,801,405



Financial Health

- Credit rating agencies undertake a comprehensive evaluation to assess the utility's ability pay for operation and maintenance of the system and to pay debt service
- TMWA is currently rated Aa2 by Moody's Investors Service, AA+ by S&P and AAA by Fitch Ratings
- Primary factors driving credit of municipal water utilities are the size and health of the system and its service area, the financial strength of its operations, the legal provisions governing its management, and the strength of its rate management and regulatory compliance
- Financial health is a utility's ability to ensure uninterrupted operations, respond to short-term shocks and long-term concerns
- Common factors to assess the financial health of a utility are
 - Debt Service Coverage: Measures "net revenues are sufficient to cover debt service shows a utility's margin to tolerate business risks or declines in demand while still assuring repayment of debt" ⁽¹⁾
 - Net revenues divided by debt service
 - Liquidity & Reserves - Days Cash on Hand: "Cash is the paramount resource utilities have to meet expenses, cope with emergencies, and navigate business interruptions. Utilities with a lot of cash and cash equivalents are able to survive temporary disruptions and cash flow shortfalls without missing important payments" ⁽¹⁾
 - Unrestricted cash and liquid investments times 365 divided by operating and maintenance expenses, expressed in days revenues divided by debt service

Example - Moody's Rating Criteria	
Metric	% of Total Score
System Characteristics - 30%	
Asset Condition	10%
Service Area Wealth	12.50%
System Size	7.50%
Financial Strength - 40%	
Annual Debt Service Coverage	15%
Days Cash on Hand	15%
Debt to Operating Revenues	10%
Management - 20%	
Rate Management	10%
Regulatory Compliance/Capital Planning	10%
Legal Provisions - 10%	
Rate Covenant	5%
Debt Service Reserve Requirement	5%



Rating Thresholds for Coverage and Liquidity

- From fiscal years 2018-2022 TMWA's senior lien debt service coverage ranged between 1.8x – 3.0x.⁽¹⁾ Due to significant increases in operating cost driven by high inflation, as well as reduced operating revenues due to an unusually wet year, FY 2023's senior lien debt service coverage is approximately 1.4x
- TMWA's cash position continues to be strong with estimated FY end 2023 unrestricted cash and investments of \$131 million providing approximately 591 days cash on hand.
- For rate setting and the long-term funding plan, we recommend a minimum all-in debt service coverage ratio of 1.5x and that TMWA maintain a minimum reserve based on the reserve policy while ensuring a minimum 150 days cash on hand**

Credit Rating Thresholds for Coverage and Liquidity					
S&P		AAA	AA	A	Weight to Final Rating Score
	Coverage	> 1.6x	1.6x ≥ n > 1.4x	1.4x ≥ n > 1.2x	20%
	Days Cash on Hand – min \$75 million ⁽¹⁾	> 90 days	90 days ≥ n > 30 days	30 days ≥ n > 15 days	20%
Moody's		Aaa	Aa	A	Weight to Final Rating Score
	Coverage	> 2.0x	2.0x ≥ n > 1.7x	1.7x ≥ n > 1.25x	15%
	Days Cash on Hand	> 250 days	250 days ≥ n > 150 days	150 days ≥ n > 35 days	15%
Fitch	Strong				Weight to Final Rating Score
	Coverage	Fitch uses a Debt to Cash Flow Ratio instead of DSC but clarifies that debt service coverage below 1.0x is weak and risk additive			Fitch does not explicitly weight individual key rating drivers in determining its overall rating
	Days Cash on Hand	≥ 90 days			

(1) Excludes SDC revenue

(2) Rating associated for entities with unrestricted cash greater than \$75 million.

Source: Moody's, S&P Global and Fitch Ratings credit rating methodologies



Moody's Credit Rating Summary

- Truckee Meadows Water Authority currently holds an issuer rating from Moody's at Aa2 (Stable Outlook)
- Details from their most recent rating annual comment are summarized below:

Current Rating / Outlook	Aa2 / Stable
Date of Last Rating	July 20, 2021 – Annual Comment
Credit Strengths	<ol style="list-style-type: none"> 1) The system size, measured as operating and maintenance expenses (\$58.2 million), is favorably bigger than the US median 2) Both the days cash on hand (932 days) and the coverage of the annual debt service by net revenues (3.7x) are excellent and exceed the US median 3) The system's debt burden has decreased from fiscal 2016
Credit Challenges	<ol style="list-style-type: none"> 1) The debt to operating revenues (3.1x) is elevated and above other Moody's-rated water systems nationwide

What could make the rating go up?

- Consistently stronger debt service coverage
- Appreciation in wealth measures supported by economic diversification

What could make the rating go down?

- Substantial deterioration of liquidity
- Protracted weakness in debt service coverage
- Newfound unwillingness to adopt prudent rate increases



S&P Credit Rating Summary

- Truckee Meadows Water Authority currently holds an issuer rating from S&P at AA+ (Stable Outlook)
- Details from their most recent rating report are summarized below:

Current Rating / Outlook	AA+ / Stable
Date of Last Rating	April 17, 2018 – Rating Report
Credit Strengths	<ol style="list-style-type: none"> 1) Participation in the strong Reno metropolitan statistical area (MSA), which has a broad and diverse economic base with good income indicators 2) Very low industry risk as a monopolistic service provider of an essential public utility and the successful consolidation of the regional water service systems into the authority 3) Very strong historical all-in debt service coverage (DSC) that has been above 1.6x and is anticipated to remain very strong during the forecast period 4) Strong financial management practices and policies
Credit Challenges	<ol style="list-style-type: none"> 1) No credit challenges to report

What could make the rating go up?

- S&P does not anticipate raising the ratings during the outlook horizon
- Any potential for an upgrade, would be based on significantly stronger income and economic indicators and the authority's ability to sustain its extremely strong coverage and liquidity metrics

What could make the rating go down?

- Given the historical and projected financial performance, S&P does not anticipate taking any negative rating action
- There would likely need to be a significant deterioration in either coverage or liquidity levels before a downward rating action would occur



Fitch Credit Rating Summary

- Truckee Meadows Water Authority currently holds an issuer rating from Fitch at AAA (Stable Outlook)
- Details from their most recent rating report are summarized below:

Current Rating / Outlook	AAA / Stable
Date of Last Rating	March 9, 2022 – Rating Report
Credit Strengths	<ol style="list-style-type: none"> 1) Sustained very low and declining leverage, measured as net adjusted debt to adjusted funds available for debt service (FADS), within the framework of very strong revenue defensibility and very low operating risks 2) Resilience of service area during the COVID-19 economic contraction, which demonstrated an increasingly diversified and much improved service territory since a decade ago 3) Very low operating cost burden and consistently healthy levels of capex
Credit Challenges	<ol style="list-style-type: none"> 1) No credit challenges to report

What could make the rating go up?

- Not applicable given the 'AAA' rating

What could make the rating go down?

- Sustained increase in leverage to over 5.0x in Fitch's base and stress scenario, assuming stability in the current revenue defensibility and operating risk assessment
- Weakening of the service area that materially affects either the socio-economic demographics or rate flexibility

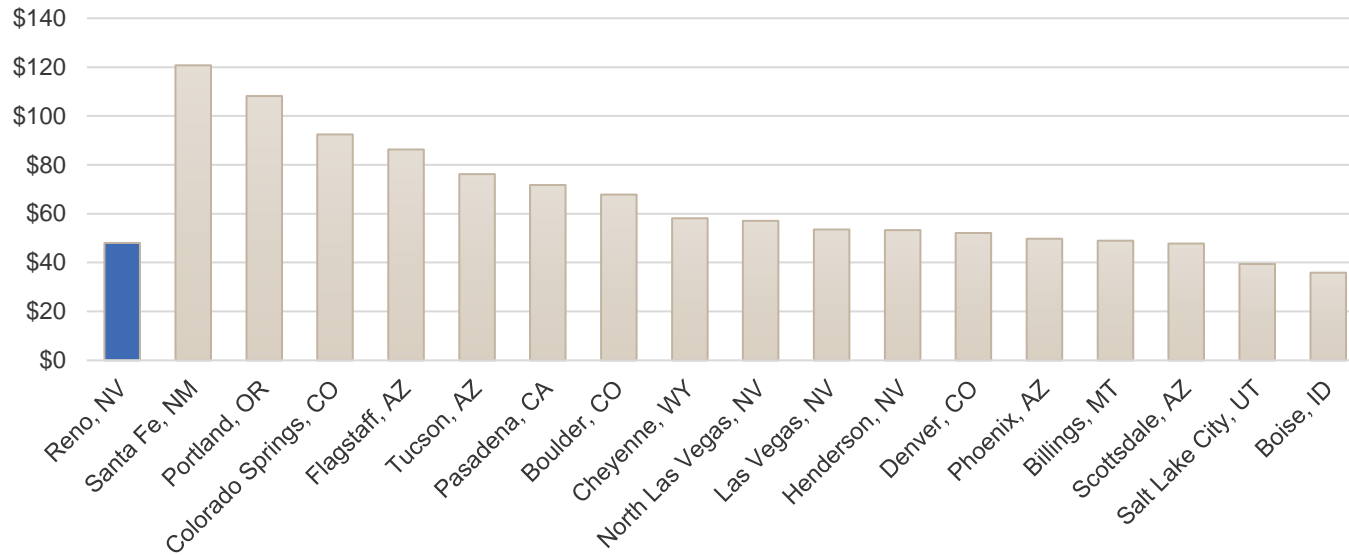


V. Affordability



Peer Comparison

Residential Single Family Home – 2022 Average Monthly Water Bill Comparison





VI. Projections without Rate Increases



Projections without Rate Increases

- With no rate increases, the Authority is projecting a total cash draw of approximately **\$216.8 million** from forecasted FY 2024 to forecasted FY 2033
- Neither the debt service coverage target of 1.5x nor the reserve policy is met

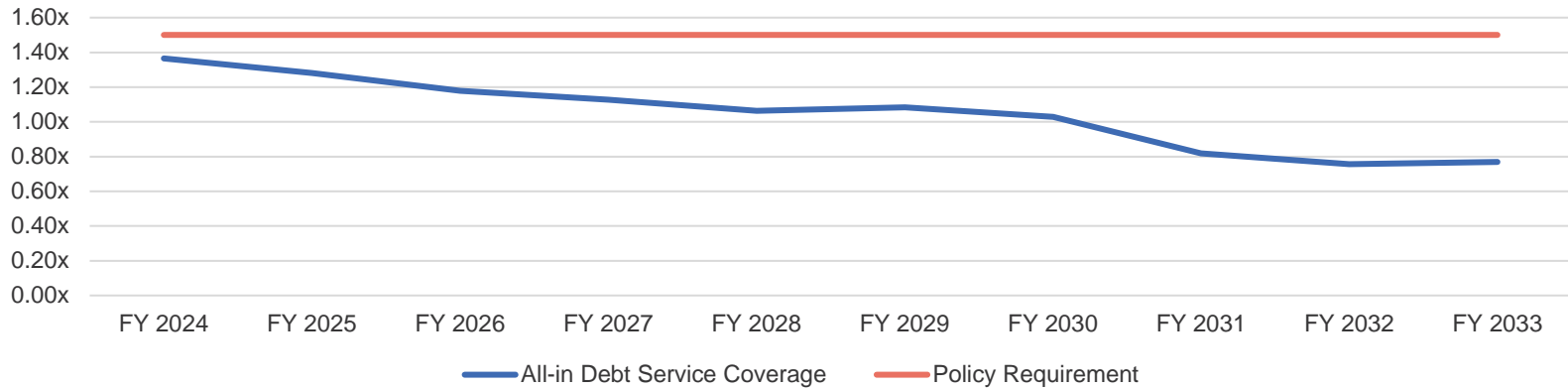
	Forecast FY 2024	Forecast FY 2025	Forecast FY 2026	Forecast FY 2027	Forecast FY 2028	Forecast FY 2029	Forecast FY 2030	Forecast FY 2031	Forecast FY 2032	Forecast FY 2033
Projected Rate Increases	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Revenue Requirement (expenditures)										
Operating Expenses (excl. depreciation)	\$83,447,384	\$88,569,024	\$92,952,819	\$95,570,674	\$98,354,540	\$100,641,724	\$103,169,654	\$105,736,599	\$108,330,611	\$110,701,556
Debt Service on customer related debt	30,382,504	28,919,113	29,672,626	29,680,445	29,510,897	27,735,777	27,344,523	32,857,750	32,865,854	32,864,417
Rehabilitative Capital Spending	27,720,900	32,252,000	30,420,000	37,080,393	37,636,599	38,201,148	38,774,165	39,355,778	39,946,114	40,545,306
Total Revenue Requirement	\$141,550,788	\$149,740,137	\$153,045,445	\$162,331,512	\$165,502,035	\$166,578,649	\$169,288,343	\$177,950,127	\$181,142,580	\$184,111,279
Recurring Revenues										
Water Sales Revenues	\$116,564,026	\$117,926,516	\$119,278,429	\$120,576,020	\$121,845,761	\$123,046,249	\$124,166,381	\$125,284,485	\$126,340,975	\$129,815,352
Hydroelectric Sales	2,845,576	2,902,488	2,960,537	3,019,748	3,080,143	3,141,746	3,204,581	3,268,672	3,334,046	3,400,727
Other Operating Sales	3,322,025	3,355,245	3,388,798	3,422,686	3,456,913	3,491,482	3,526,396	3,561,660	3,597,277	3,633,250
Investment Income	4,870,030	4,917,246	4,357,901	3,958,163	3,372,199	2,906,153	2,440,742	1,927,934	1,240,957	494,279
Total Recurring Revenues	\$127,601,657	\$129,101,494	\$129,985,665	\$130,976,616	\$131,755,015	\$132,585,629	\$133,338,100	\$134,042,752	\$134,513,255	\$137,343,607
Surplus (Deficiency)	(\$13,949,131)	(\$20,638,643)	(\$23,059,780)	(\$31,354,896)	(\$33,747,020)	(\$33,993,020)	(\$35,950,243)	(\$43,907,375)	(\$46,629,324)	(\$46,767,672)
All-in Debt Service Coverage	1.36x	1.28x	1.18x	1.13x	1.06x	1.08x	1.03x	0.82x	0.76x	0.77x
Total Cash Beginning of Period	\$219,800,000	\$215,039,729	\$190,578,619	\$173,097,358	\$147,472,131	\$127,091,128	\$106,737,888	\$84,311,923	\$54,269,236	\$21,615,673
Other Cash Flow Impacts ⁽¹⁾	\$9,188,859	(\$3,822,467)	\$5,578,518	\$5,729,669	\$13,366,018	\$13,639,780	\$13,524,278	\$13,864,688	\$13,975,762	\$14,090,112
Restricted Cash	\$65,757,006	\$51,156,896	\$50,650,838	\$53,119,532	\$54,534,378	\$55,885,462	\$57,296,067	\$58,732,962	\$60,194,548	\$61,639,542
Rate Stabilization Fund	10,613,069	10,733,429	10,851,006	10,964,041	11,071,752	11,174,913	11,273,755	11,307,298	11,370,688	11,683,382
Unrestricted Cash	\$138,669,654	\$128,688,294	\$111,595,514	\$83,388,558	\$61,484,999	\$39,677,513	\$15,742,100	(\$15,771,025)	(\$49,949,563)	(\$84,384,811)
Total Cash End of Period	\$215,039,729	\$190,578,619	\$173,097,358	\$147,472,131	\$127,091,128	\$106,737,888	\$84,311,923	\$54,269,236	\$21,615,673	(\$11,061,888)
Unrestricted Cash Required by BOD Resolution 266	\$106,341,410	\$108,332,816	\$110,083,957	\$111,252,250	\$112,481,793	\$113,551,807	\$114,708,222	\$115,883,917	\$117,075,036	\$118,196,328

(1) Includes growth related capital expenditures and debt service, connection fee revenue, grants, reimbursements to capital expenditures on behalf of City of Reno
 Note that Restricted Cash also includes Retrofit fund, DWSRF, TRIGID Cash, Sustainability funds

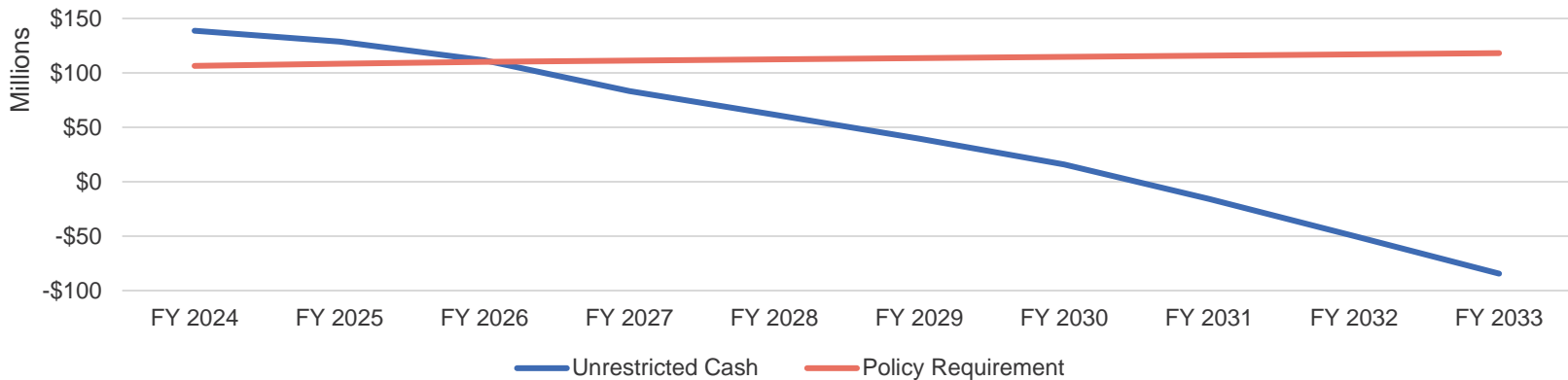


Projections without Rate Increases

Debt Service Coverage



Cash Balance





VII. Rate Change Scenarios



Scenario A: 5.25%, 4.0%, 3.5% increases in FY 2024, 2025, & 2026, and 2.5% thereafter, No Use of Rate Stabilization Fund

- With these rate adjustment, the Authority can maintain its reserve requirements and meet the minimum all-in debt service coverage of 1.50x beginning in forecasted FY 2025
- This scenario assumes no draws on the Rate Stabilization Fund

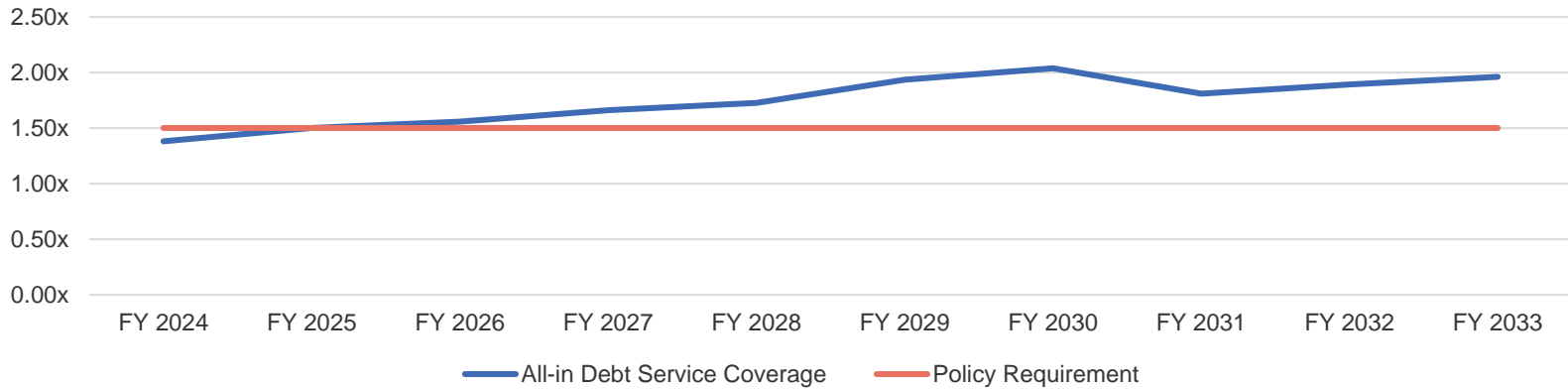
	Forecast FY 2024	Forecast FY 2025	Forecast FY 2026	Forecast FY 2027	Forecast FY 2028	Forecast FY 2029	Forecast FY 2030	Forecast FY 2031	Forecast FY 2032	Forecast FY 2033
Projected Rate Increases	5.25%	4.00%	3.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Revenue Requirement (expenditures)										
Operating Expenses (excl. depreciation)	\$83,447,384	\$88,569,024	\$92,952,819	\$95,570,674	\$98,354,540	\$100,641,724	\$103,169,654	\$105,736,599	\$108,330,611	\$110,701,556
Debt Service on customer related debt	30,382,504	28,919,113	29,672,626	29,680,445	29,510,897	27,735,777	27,344,523	32,857,750	32,865,854	32,864,417
Rehabilitative Capital Spending	27,720,900	32,252,000	30,420,000	37,080,393	37,636,599	38,201,148	38,774,165	39,355,778	39,946,114	40,545,306
Total Revenue Requirement	\$141,550,788	\$149,740,137	\$153,045,445	\$162,331,512	\$165,502,035	\$166,578,649	\$169,288,343	\$177,950,127	\$181,142,580	\$184,111,279
Recurring Revenues										
Water Sales Revenues	\$117,211,913	\$124,646,159	\$131,005,400	\$136,938,514	\$141,888,202	\$146,869,850	\$151,877,802	\$157,095,115	\$162,369,044	\$166,834,193
Hydroelectric Sales	2,845,576	2,902,488	2,960,537	3,019,748	3,080,143	3,141,746	3,204,581	3,268,672	3,334,046	3,400,727
Other Operating Sales	3,322,025	3,355,245	3,388,798	3,422,686	3,456,913	3,491,482	3,526,396	3,561,660	3,597,277	3,633,250
Investment Income	4,870,030	4,932,061	4,526,711	4,398,989	4,197,262	4,208,386	4,317,520	4,481,296	4,580,110	4,733,629
Total Recurring Revenues Surplus (Deficiency)	\$128,249,544 (\$13,301,244)	\$135,835,952 (\$13,904,185)	\$141,881,446 (\$11,163,999)	\$147,779,937 (\$14,551,575)	\$152,622,519 (\$12,879,516)	\$157,711,464 (\$8,867,185)	\$162,926,299 (\$6,362,044)	\$168,406,744 (\$9,543,383)	\$173,880,477 (\$7,262,103)	\$178,601,799 (\$5,509,481)
All-in Debt Service Coverage	1.38x	1.50x	1.56x	1.66x	1.73x	1.94x	2.04x	1.81x	1.89x	1.96x
Total Cash Beginning of Period	\$219,800,000	\$215,687,616	\$197,960,964	\$192,375,484	\$183,553,577	\$184,040,079	\$188,812,673	\$195,974,907	\$200,296,212	\$207,009,871
Other Cash Flow Impacts ⁽¹⁾	\$9,188,859	(\$3,822,467)	\$5,578,518	\$5,729,669	\$13,366,018	\$13,639,780	\$13,524,278	\$13,864,688	\$13,975,762	\$14,090,112
Restricted Cash	\$65,757,006	\$51,156,896	\$50,650,838	\$53,119,532	\$54,534,378	\$55,885,462	\$57,296,067	\$58,732,962	\$60,194,548	\$61,639,542
Rate Stabilization Fund	11,185,904	11,777,702	12,294,963	12,770,897	13,219,076	13,675,283	14,140,259	14,296,778	14,613,214	15,015,077
Unrestricted Cash	\$138,744,706	\$135,026,366	\$129,429,682	\$117,663,149	\$116,286,626	\$119,251,928	\$124,538,581	\$127,266,472	\$132,202,109	\$138,935,883
Total Cash End of Period	\$215,687,616	\$197,960,964	\$192,375,484	\$183,553,577	\$184,040,079	\$188,812,673	\$195,974,907	\$200,296,212	\$207,009,871	\$215,590,503
Unrestricted Cash Required by BOD Resolution 266	\$106,341,410	\$108,332,816	\$110,083,957	\$111,252,250	\$112,481,793	\$113,551,807	\$114,708,222	\$115,883,917	\$117,075,036	\$118,196,328

(1) Includes growth related capital expenditures and debt service, connection fee revenue, grants, reimbursements to capital expenditures on behalf of City of Reno
Note that Restricted Cash also includes Retrofit fund, DWSRF, TRIGID Cash, Sustainability funds

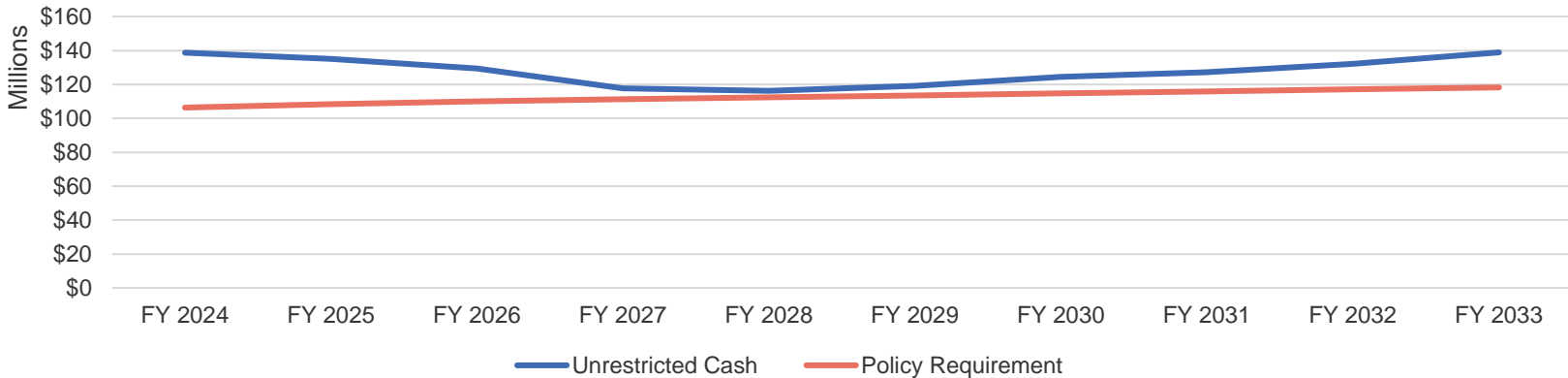


Scenario A: 5.25%, 4.0%, 3.5% increases in FY 2024, 2025, & 2026, and 2.5% thereafter, No Use of Rate Stabilization Fund

Scenario A: Debt Service Coverage



Scenario A: Cash Balance





Scenario B: 4.5%, 4.0%, 3.5% increases in FY 2024, 2025, & 2026, and 2.5% thereafter, Use of Rate Stabilization Fund

- With these rate adjustment, the Authority can maintain its reserve requirements and meet the minimum all-in debt service coverage of 1.50x
- This includes a draw of \$3.75 million and \$1.0 million in FY 2024 and FY 2025 on the Rate Stabilization Fund. The draws would be replenished in FY 2026, FY 2027, and FY 2028

	Forecast FY 2024	Forecast FY 2025	Forecast FY 2026	Forecast FY 2027	Forecast FY 2028	Forecast FY 2029	Forecast FY 2030	Forecast FY 2031	Forecast FY 2032	Forecast FY 2033
Projected Rate Increases	4.50%	4.00%	3.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Revenue Requirement (expenditures)										
Operating Expenses (excl. depreciation)	\$83,447,384	\$88,569,024	\$92,952,819	\$95,570,674	\$98,354,540	\$100,641,724	\$103,169,654	\$105,736,599	\$108,330,611	\$110,701,556
Debt Service on customer related debt	30,382,504	28,919,113	29,672,626	29,680,445	29,510,897	27,735,777	27,344,523	32,857,750	32,865,854	32,864,417
Rehabilitative Capital Spending	27,720,900	32,252,000	30,420,000	37,080,393	37,636,599	38,201,148	38,774,165	39,355,778	39,946,114	40,545,306
Total Revenue Requirement	\$141,550,788	\$149,740,137	\$153,045,445	\$162,331,512	\$165,502,035	\$166,578,649	\$169,288,343	\$177,950,127	\$181,142,580	\$184,111,279
Recurring Revenues										
Water Sales Revenues	\$117,115,159	\$123,730,308	\$130,051,840	\$135,882,172	\$140,794,708	\$145,759,345	\$150,754,412	\$155,946,271	\$161,201,002	\$165,634,029
Hydroelectric Sales	2,845,576	2,902,488	2,960,537	3,019,748	3,080,143	3,141,746	3,204,581	3,268,672	3,334,046	3,400,727
Other Operating Sales	3,322,025	3,355,245	3,388,798	3,422,686	3,456,913	3,491,482	3,526,396	3,561,660	3,597,277	3,633,250
Investment Income	4,870,030	4,929,848	4,503,505	4,353,449	4,126,524	4,111,027	4,192,541	4,327,771	4,396,804	4,519,422
Total Recurring Revenues	\$128,152,790	\$134,917,889	\$140,904,680	\$146,678,054	\$151,458,288	\$156,503,599	\$161,677,930	\$167,104,375	\$172,529,129	\$177,187,428
Surplus (Deficiency)	(\$13,397,998)	(\$14,822,248)	(\$12,140,764)	(\$15,653,458)	(\$14,043,747)	(\$10,075,049)	(\$7,610,413)	(\$10,845,752)	(\$8,613,451)	(\$6,923,852)
All-in Debt Service Coverage	1.50x⁽²⁾	1.50x⁽²⁾	1.50x	1.52x	1.67x	1.89x	2.00x	1.77x	1.85x	1.92x
Total Cash Beginning of Period	\$219,800,000	\$211,840,862	\$192,196,147	\$186,383,901	\$179,710,111	\$179,782,382	\$183,347,112	\$189,260,977	\$192,279,912	\$197,642,223
Other Cash Flow Impacts ⁽¹⁾	\$9,188,859	(\$3,822,467)	\$5,578,518	\$5,729,669	\$13,366,018	\$13,639,780	\$13,524,278	\$13,864,688	\$13,975,762	\$14,090,112
Restricted Cash	\$65,757,006	\$51,156,896	\$50,650,838	\$53,119,532	\$54,534,378	\$55,885,462	\$57,296,067	\$58,732,962	\$60,194,548	\$61,639,542
Rate Stabilization Fund	7,376,919	6,939,930	8,201,862	11,923,087	13,119,254	13,573,801	14,037,051	14,192,806	14,508,090	14,907,063
Unrestricted Cash	\$138,706,937	\$134,099,321	\$127,531,201	\$114,667,493	\$112,128,750	\$113,887,849	\$117,927,859	\$119,354,144	\$122,939,584	\$128,261,879
Total Cash End of Period	\$211,840,862	\$192,196,147	\$186,383,901	\$179,710,111	\$179,782,382	\$183,347,112	\$189,260,977	\$192,279,912	\$197,642,223	\$204,808,483
Unrestricted Cash Required by BOD Resolution 266	\$106,341,410	\$108,332,816	\$110,083,957	\$111,252,250	\$112,481,793	\$113,551,807	\$114,708,222	\$115,883,917	\$117,075,036	\$118,196,328

(1) Includes growth related capital expenditures and debt service, connection fee revenue, grants, reimbursements to capital expenditures on behalf of City of Reno

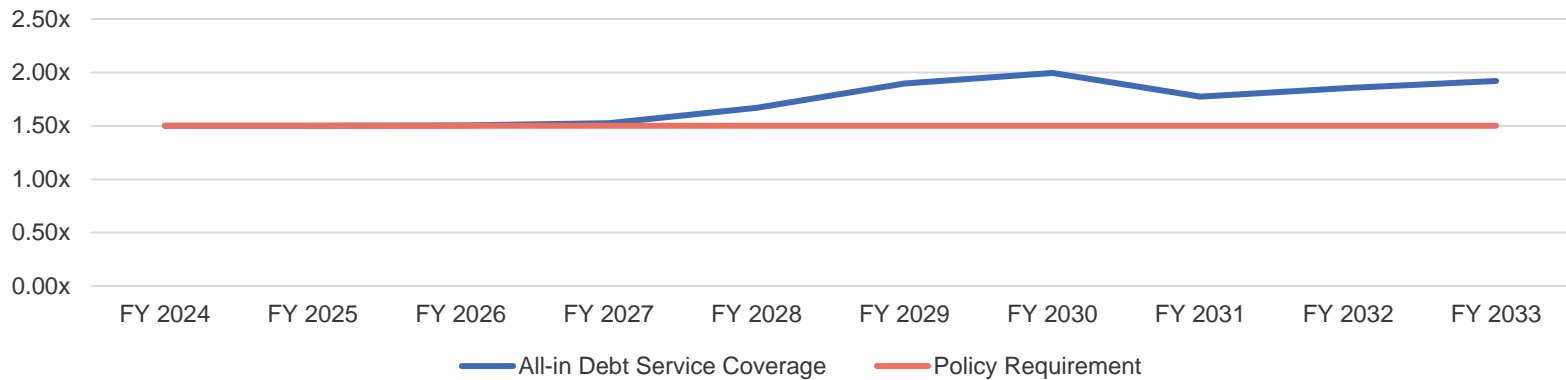
(2) Takes draws on the Rate Stabilization Fund into account

Note that Restricted Cash also includes Retrofit fund, DWSRF, TRIGID Cash, Sustainability funds

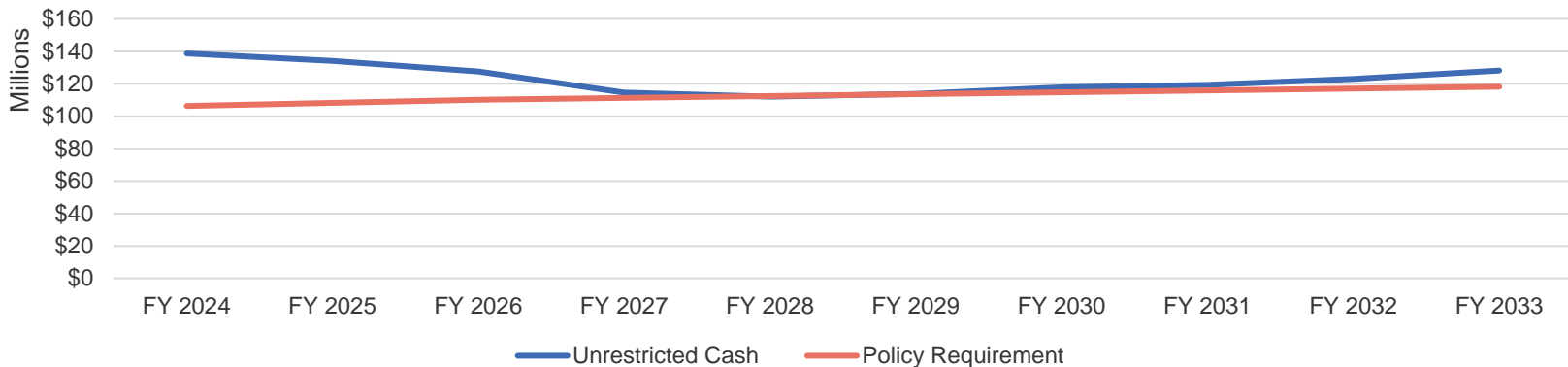


Scenario B: 4.5%, 4.0%, 3.5% increases in FY 2024, 2025, & 2026, and 2.5% thereafter, Use of Rate Stabilization Fund

Scenario B: Debt Service Coverage



Scenario B: Cash Balance

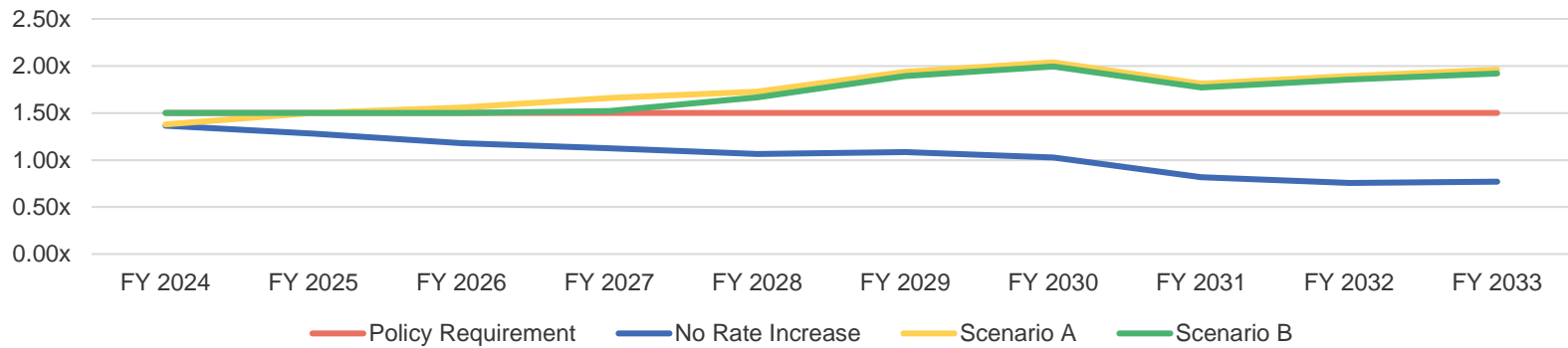




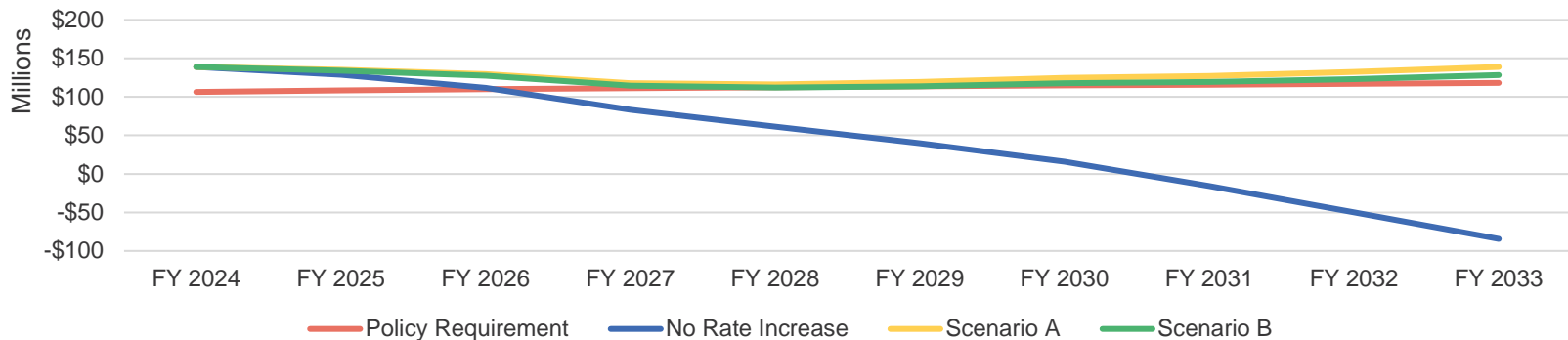
Scenario Summary

- ◆ **Recommendation: Scenario B**, based on the all-in debt service coverage staying above the 1.5x policy requirement, and unrestricted cash balance staying in a healthy range of the BOD resolution requirement

All-in Debt Service Coverage



Cash Balance





Impact on Rate Payers – Scenario B

- Over the next three years, the median customers bill is expected to increase as shown below, as well as the impact of using the Rate Stabilization Fund

Monthly Water Bill Impact on Median Customer

<i>Rate Increase</i>	FY 2024		FY 2025		FY 2026		Total		Total Difference to	
	4.50%		4.00%		3.50%				Scenario A	
Season	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter	Summer
Residential	\$1.24	\$2.56	\$1.16	\$2.38	\$1.05	\$2.17	\$3.45	\$7.11	(\$0.22)	(\$0.46)
Multi-Family	\$2.09	\$2.80	\$1.94	\$2.60	\$1.77	\$2.36	\$5.80	\$7.76	(\$0.38)	(\$0.50)
Commercial	\$1.49	\$2.46	\$1.38	\$2.28	\$1.26	\$2.08	\$4.13	\$6.81	(\$0.27)	(\$0.44)





STAFF REPORT

TO: Board of Directors
THRU: John R. Zimmerman, General Manager
FROM: Matt Bowman, CFO
DATE: August 8, 2023
SUBJECT: Discussion and action, and possible direction to staff regarding potential debt restructure through a cash optimization

Recommendation

TMWA staff recommends the Board consider the opportunity to restructure approximately \$75m in existing debt, using a cash optimization strategy which is estimated to result in a net present value savings of 9.14% at current rates.

Discussion

Along with TMWA's financial advisor, PFM, Staff is presenting an opportunity to restructure approximately \$75m of outstanding debt at lower interest rates. Using a cash optimization strategy, TMWA would pay off higher cost, existing debt, then issue new debt at lower rates. At current rates, this transaction would result in a net present value savings of \$6.4m, or 9.14% of the defeased bonds. Staff does not expect the savings from this transaction to directly impact customer rates. See *Attachment A* for a sensitivity analysis comparing changes in current market rates to net present value return on the transaction. The analysis shows that an increase in market rates of 0.69% would result in a 3% net present value savings.

A cash optimization strategy to restructure debt at tax exempt rates is an accepted method due to a minimum 15-day separation between the defeasance of existing debt and sale date for the issuance of new debt. This is acceptable, generally, because there is market interest rate risk during this 15-day period. The substance of this transaction has been discussed with TMWA's bond counsel, Sherman & Howard.

The cash optimization strategy is not a refunding but may result in present value savings similar to those achieved in a refunding. According to TMWA's Debt Management Policy, TMWA will generally consider refunding outstanding bonds if one or more of the following conditions exist:

1. *Present value savings are at least three percent of the par amount of the refunding bonds.*
2. *The bonds to be refunded have restrictive or outdated covenants.*
3. *Restructuring the debt is deemed to be desirable.*

Should the Board direct Staff to pursue this opportunity, Staff would bring two resolutions to the Board in September, formally authorizing Staff to move forward with the defeasance and issuance of new money bonds. The current timeline specifies the defeasance of the existing debt on September 28, with the new money bonds priced on October 17th. Staff would continue to monitor the estimated return on the transaction up to the point of the defeasance, with the ability to defer or not execute the transaction should the estimated return fall below three percent.

It should be noted that if Staff moves forward with the transaction, but ultimately determines not to execute, there could be issuance costs incurred by TMWA. These costs are estimated to be no more than \$150k.

Possible Motions

- Move to direct staff to pursue the opportunity presented and work with bond counsel to prepare resolutions for defeasance and issuance of new money bonds for approval at the September Board meeting.
- Move to direct staff to discontinue pursuing the opportunity at this time.



Truckee Meadows Water Authority

Cash Optimization Opportunity

August 8, 2023

PFM Financial Advisory LLC

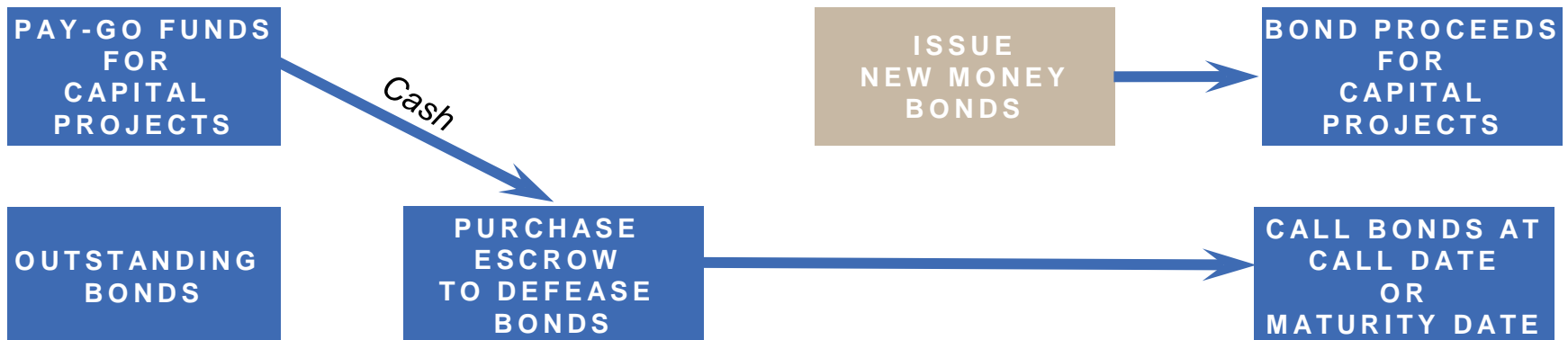
107 Spring Street
Seattle, WA 98104

Thomas Toepfer
206.858.5360
pfm.com



Cash Optimization Strategy

- TMWA has identified up to \$75 million in capital projects to be funded over the next 3 years. PFM estimates that TMWA can borrow for these projects at a rate of approximately 3.25%
- TMWA has identified a similar amount of existing debt paying a rate of 5% that can be defeased
- The difference in the lower cost new debt (~3.25% interest cost) versus the defeased higher cost existing debt (~5%) has an estimated net present value of \$6.4 million in the current market
- Both transactions (a) the defeasance of existing debt and (b) the issuance of new bonds for capital projects have to be completed separately – typically a time difference of at least 15 days
 - There is market interest rate risk during this time
- TMWA would have approximately the same amount of debt outstanding after the cash optimization strategy as before
 - no additional debt





Debt Service Impact and Sensitivity to Interest Rates

- TMWA and PFM will continue to monitor this opportunity and present actions to the Board in September

Period Ending	2015 and 2016 Deceased Bonds Debt Service	Debt Service for New Capital Projects	Difference	Difference if Rates increase 0.22%	Difference if Rates increase 0.46%	Difference if Rates increase 0.69%
6/30/2024	\$1,752,250	\$492,338	\$1,259,913	\$1,251,325	\$1,241,800	\$1,232,575
6/30/2025	3,504,500	3,282,250	222,250	165,000	101,500	40,000
6/30/2026	3,504,500	3,282,250	222,250	165,000	101,500	40,000
6/30/2027	3,504,500	3,282,250	222,250	165,000	101,500	40,000
6/30/2028	3,504,500	3,282,250	222,250	165,000	101,500	40,000
6/30/2029	3,504,500	3,282,250	222,250	165,000	101,500	40,000
6/30/2030	3,504,500	3,282,250	222,250	165,000	101,500	40,000
6/30/2031	3,504,500	3,282,250	222,250	165,000	101,500	40,000
6/30/2032	5,147,375	4,291,375	856,000	637,875	389,125	152,125
6/30/2033	10,484,125	9,626,500	857,625	638,000	393,875	156,125
6/30/2034	30,143,500	29,286,000	857,500	636,875	392,750	154,750
6/30/2035	30,109,750	29,249,250	860,500	634,500	390,875	153,125
6/30/2036	2,214,125	1,357,500	856,625	635,750	393,125	156,125
6/30/2037	2,208,875	1,353,000	855,875	635,500	389,500	153,750
Total	\$106,591,500	\$98,631,713	\$7,959,788	\$6,224,825	\$4,301,550	\$2,438,575
		Net Present Value	\$6,405,241	\$5,000,000	\$3,500,000	\$2,100,000
		Net Present Value as % of deceased bonds	9.14%	7.10%	5.00%	3.00%

Assumes interest rates as of August 3, 2023 – Bloomberg BVAL for AA-rated water/sewer utilities plus 10 bps.
The net present value is based on the arbitrage yield of the new money bonds.



STAFF REPORT

TO: Board of Directors
THRU: John R. Zimmerman, General Manager
FROM: Bill Hauck, Water Supply Supervisor
DATE: August 8, 2023
SUBJECT: **Truckee Basin Water Management Options Pilot (WMOP) Study Update**

In August of 2019, TMWA, along with other key stakeholders in the Truckee River Basin (TROA Administrator, State of California, Pyramid Lake Paiute Tribe) were awarded a \$1.8M cost-share funding grant through the Bureau of Reclamation's WaterSMART Basin Studies Program. The grant's purpose is to conduct a study to address the projected increases in the future supply-demand imbalance as a result of changing climate conditions in the Truckee Basin through improved wintertime flood control operations of federally operated upstream reservoirs. A memorandum of agreement (MOA) was signed in June 2020 for a 3-year study by the cost-share partners.

The Truckee Basin Water Management Options Pilot (WMOP) study is a preliminary effort to update and improve flood control operations on the Truckee River for the benefit of water supply in the basin. Stakeholders in the project identified problems with the United States Army Corps of Engineers (USACE) Water Control Manual which governs wintertime flood control operations within the Truckee Basin. This manual was adopted in 1985 and is based on outdated hydrology, obsolete rule curves, inflexible storage requirements, constrained reservoir release thresholds, and overly conservative downstream flow limits through Reno. It also does not factor in the major advances in weather forecasting technology since that time, the Truckee River Operating Agreement (TROA) which was implemented in 2015, numerous flood mitigation projects which were completed through Reno and Sparks, or the recent improvements made at Stampede Reservoir where the crest of the dam was raised 11.5 feet.

The goal of the WMOP is to identify a *new* flood control policy for the wintertime operation of upstream Truckee River reservoirs that provides the flexibility required to meet water supply objectives without increasing the risk of downstream flooding. The project seeks to identify a preferred flood operations policy using forecast informed reservoir operations (FIRO) that best addresses the compromise between the competing objectives of water supply and flood control, which are inherently opposed to each other. As a policy written with only water supply in mind would keep upstream reservoirs as full as possible year-round, while a policy written with reducing the risk for wintertime flooding in mind would keep the reservoirs (Stampede, Boca, and Prosser Creek) empty so that major flood flows could be captured upstream.

One of the major problems operating according the current 1985 Water Control Manual is that it does not allow filling of upstream federally-owned reservoirs to begin until mid-April, even in the driest of years. This can be especially problematic during low snowpack years when a sizable portion of the runoff may occur prior to that. This problem *may also be* exacerbated over time by a climate that is projected to continue to warm in the future. Under a continued warming Sierra Nevada, more wintertime precipitation is projected to come in the form of rain as opposed to snow, and the snowmelt runoff period is likely to shift earlier in the year. And during big snowpack years, the approved flood control diagrams can delay filling the flood space sometimes until it is too late in the season to capture sufficient runoff to refill the reservoirs. By the time filling is allowed into the flood storage space, based on the rule curves in the existing Manual, the runoff has receded to a level that some reservoirs are not always able to fill to capacity. Another constraint in the 1985 Manual is the overly conservative USACE flood operations maximum target flow through Reno of 6,000 cubic feet per second (CFS). An argument could be made that this limit on flows through Reno has contributed to increased peak flows over the years during floods on the Truckee River as upstream reservoir flood space could not be evacuated in advance of big wintertime precipitation events.

Numerous policy alternatives, driven by a set of goals and constraints were developed by the stakeholders using the latest river forecasting technology and the RiverWare planning model. These alternatives were then evaluated using a Multi-Objective Evolutionary Algorithm (MOEA) developed specifically for this study. This MOEA is a state-of-the-art approach to answering real world problems that require balancing multiple, often competing objectives. It has been critical in helping to answer the question central to this study, which is how to improve water supply while ensuring that sufficient flood space is maintained in upstream reservoirs during the winter months. The results of the MOEA have allowed stakeholders in the project to analyze and select the policy or alternative that best meets the subjective tradeoffs between water supply and the potential for increased flooding.

A final preferred policy will be presented to the USACE as a viable alternative to the current 1985 Manual. This final viability assessment for the Water Management Options Pilot for the Truckee Basin is expected to be completed and submitted to the USACE by December 2023 for review. If accepted and implemented by USACE, it will make flood control operations within the Truckee Basin state-of-the-art using FIRO, improving the overall water supply for all basin stakeholders, particularly TMWA and the Pyramid Lake Paiute Tribe, while providing significant benefits for Reno and Sparks in terms of minimizing the impacts of flooding on the Truckee River.



Water Management Options Pilot (WMOP) - *Update*

Bill Hauck, Water Supply Supervisor

August 16, 2023

“One of the greatest challenges for water managers over the years has been the inability to be able to adapt to extremes in wintertime precipitation from year to year with the constraints on how federally-owned reservoirs on the Truckee River must be operated for flood control”

“And with the looming possibility for warmer wintertime temperatures under an uncertain climate, where snowmelt runoff may begin shifting earlier into the season, it is critical that new policy be developed which will provide the flexibility needed to effectively manage the upstream reservoirs for both flood control and water supply in the future”

-TMWA

US Army Corps of Engineers (USACE)



US Army Corps
of Engineers®

Water Control Manual (WCM)

- Published in 1985
- Guides how federally-owned Truckee River reservoirs (Prosser, Boca, Stampede) must be operated in order to maintain adequate flood storage space during the winter months (managing for water supply not a priority)

The WCM has its shortcomings, and suffers from:

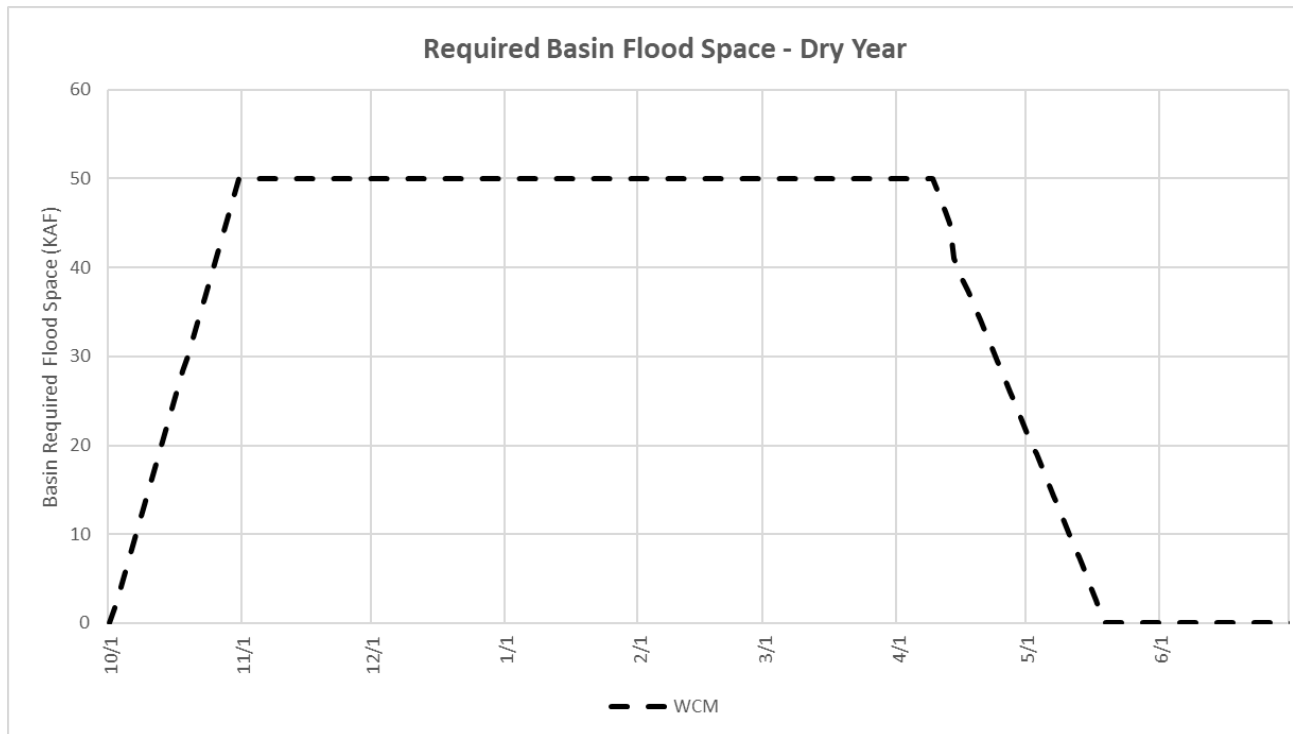
- Outdated hydrology (1950-1980)
- Obsolete Rule Curves for filling
- Mandatory minimum flood space requirements
- Overly conservative maximum flow targets through Reno
- Inflexible rules that apply year after year regardless of hydrology

Truckee River System



USACE flood control policy is **overly constrained and inflexible**

- By November 1st, 50KAF of flood space must be reserved between Prosser, Stampede and Boca reservoirs
- Reservoirs are not allowed to start filling again until at the earliest, April 10th
- Reservoirs may not fill in some years where it **should** have been possible
- Reservoirs may have to spill water during fall drawdown when there is absolutely no risk of flooding after a solid winter



Truckee Basin Water Management Options Pilot

\$1.82M Grant awarded through United States Department of the Interior (DOI)

Bureau of Reclamation's waterSMART basin studies program



MOA signed June 2020 established terms guiding the Performance of the 3-year study



Final Draft Expected **December 2023***



US Army Corps of Engineers®

Goal -

Evaluate ways to reoperate the federally-owned upstream reservoirs (Prosser, Stampede and Boca) in the wintertime in order to provide much-needed flexibility to optimize storage for water supply and fisheries operations, while not increasing the downstream risk of flooding through Reno and Sparks to update the USACE Water Control Manual



Objectives -

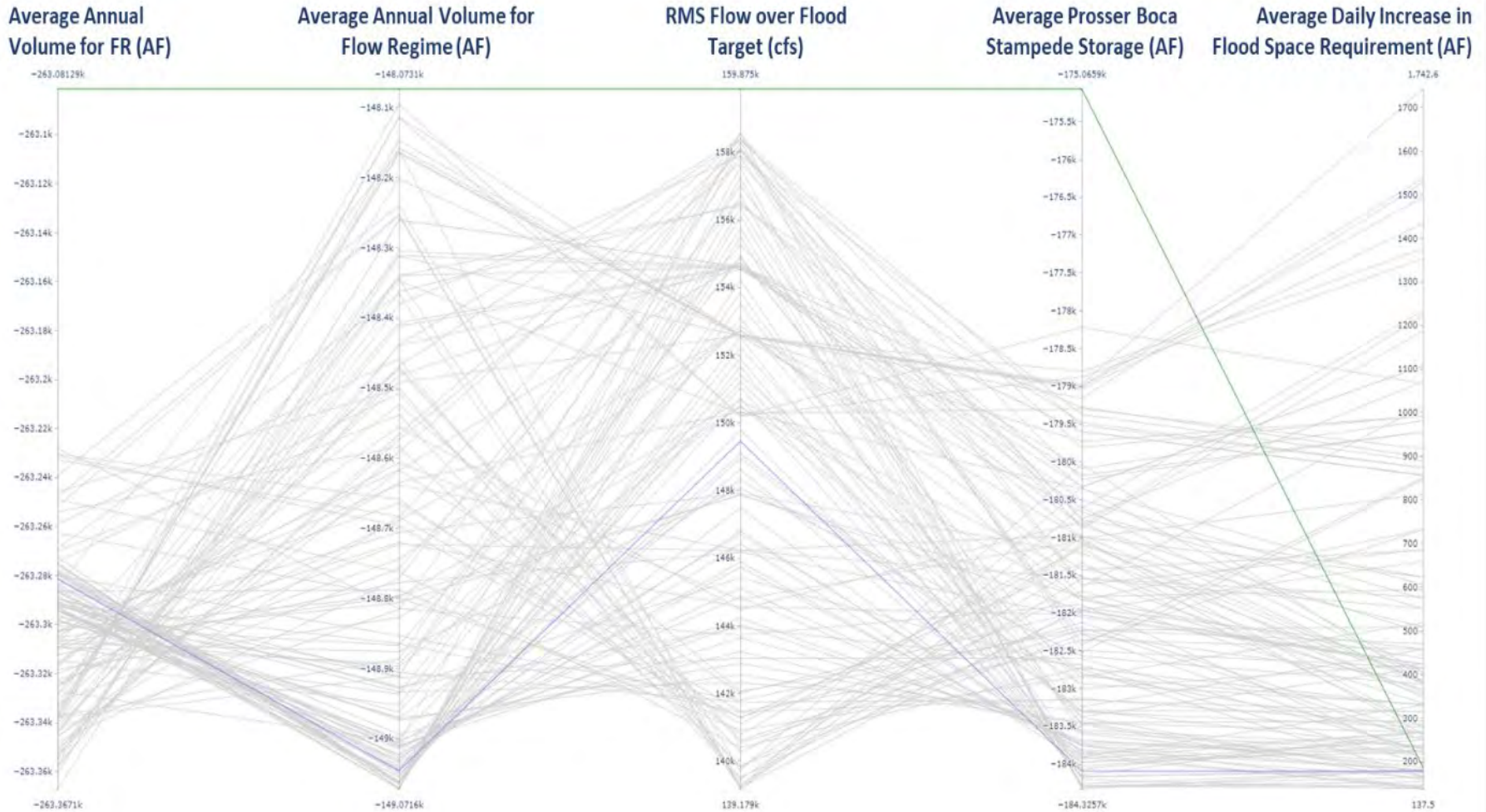
- **Maximize number of Floriston Rate days** or the amount of Floriston Rate water in storage
- **Maximize flexibility during fall drawdown** under flood control measures
- **Maximize flexibility during spring refill** in reservoirs up to the maximum conservation elevation
- **Reduce risk of flooding downstream**
- **Improve in-stream flows** downstream of reservoir
- Optimize reservoir storage to satisfy water demands throughout the year
- **Develop methodologies that are feasible to implement**

WMOP Methodology Overview

- Balance between water supply and flood protection
 - these two goals are inherently opposed*
- The study attempted to determine more flexible flood control operational criteria without causing additional flood risk
- An optimization algorithm (MOEA) was developed by TMWA's consultant PWRE to aid the technical team in determining the “optimal tradeoff” between water supply, flood control, and other objectives



WMOP Methodology Overview Cont.



WMOP Methodology Overview Cont.

Key stakeholders analyzed the results over a period of six months and ultimately decided on a “Preferred Alternative 6A”

- TMWA
- Federal Water Master/TROA Administrator
- US Bureau of Reclamation
- CA Department of Water Resources
- Pyramid Lake Paiute Tribe
- TRFMA

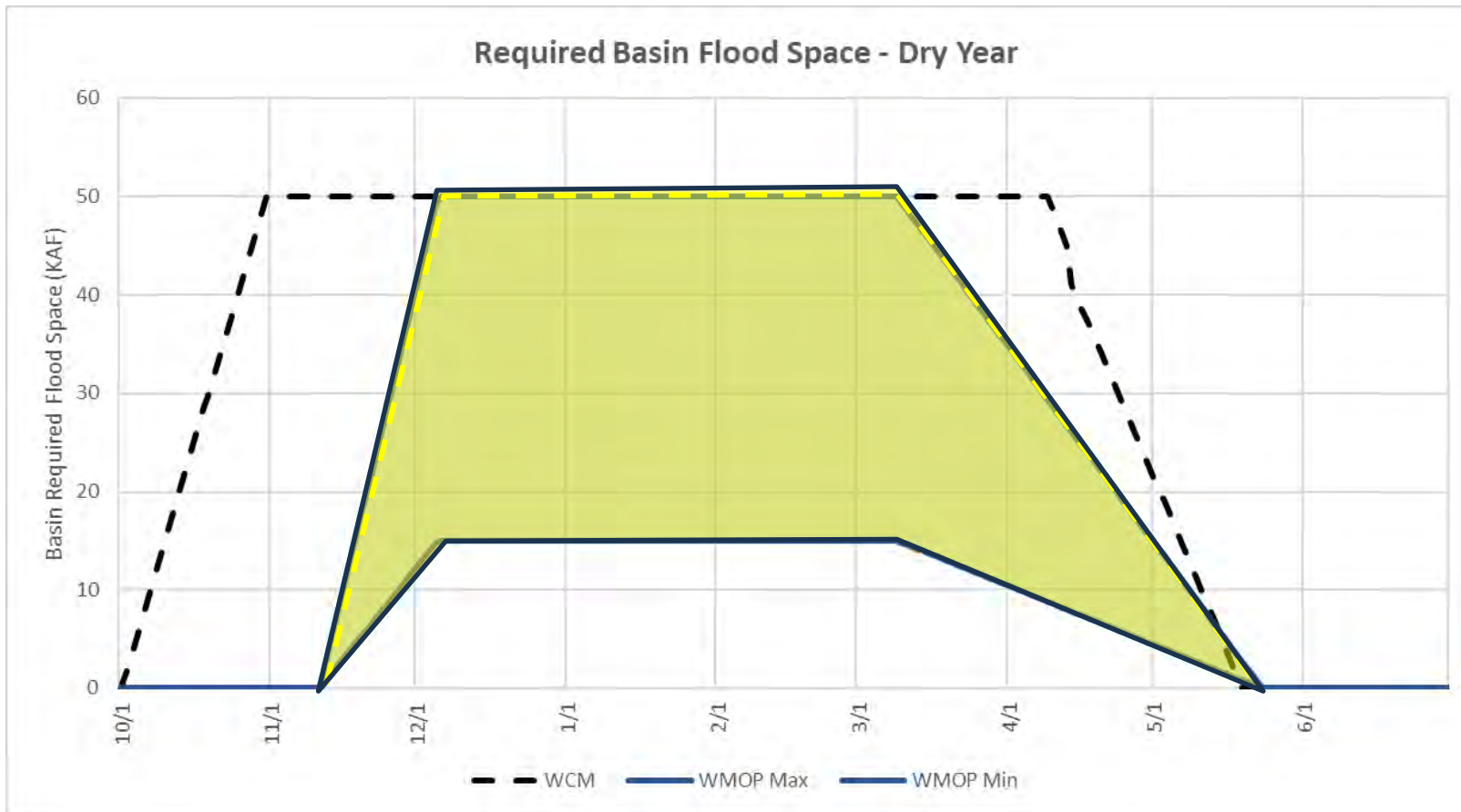


WMOP Study *Preferred Alternative (6A)*

- Required amount of flood space is **variable** depending on if a flood event is forecasted or not (and the runoff forecast)
- In dry conditions (i.e., no floods in the immediate forecast), the basin would only need to be drawn down *minimally*, leaving more space for storage
- In wetter conditions (floods in the immediate forecast), the basin would be required to evacuate flood space ahead of storm to protect against flooding
- Adaptively managing the reservoirs with **Forecast Informed Reservoir Operations (FIRO)**
- ***Operational Flexibility***

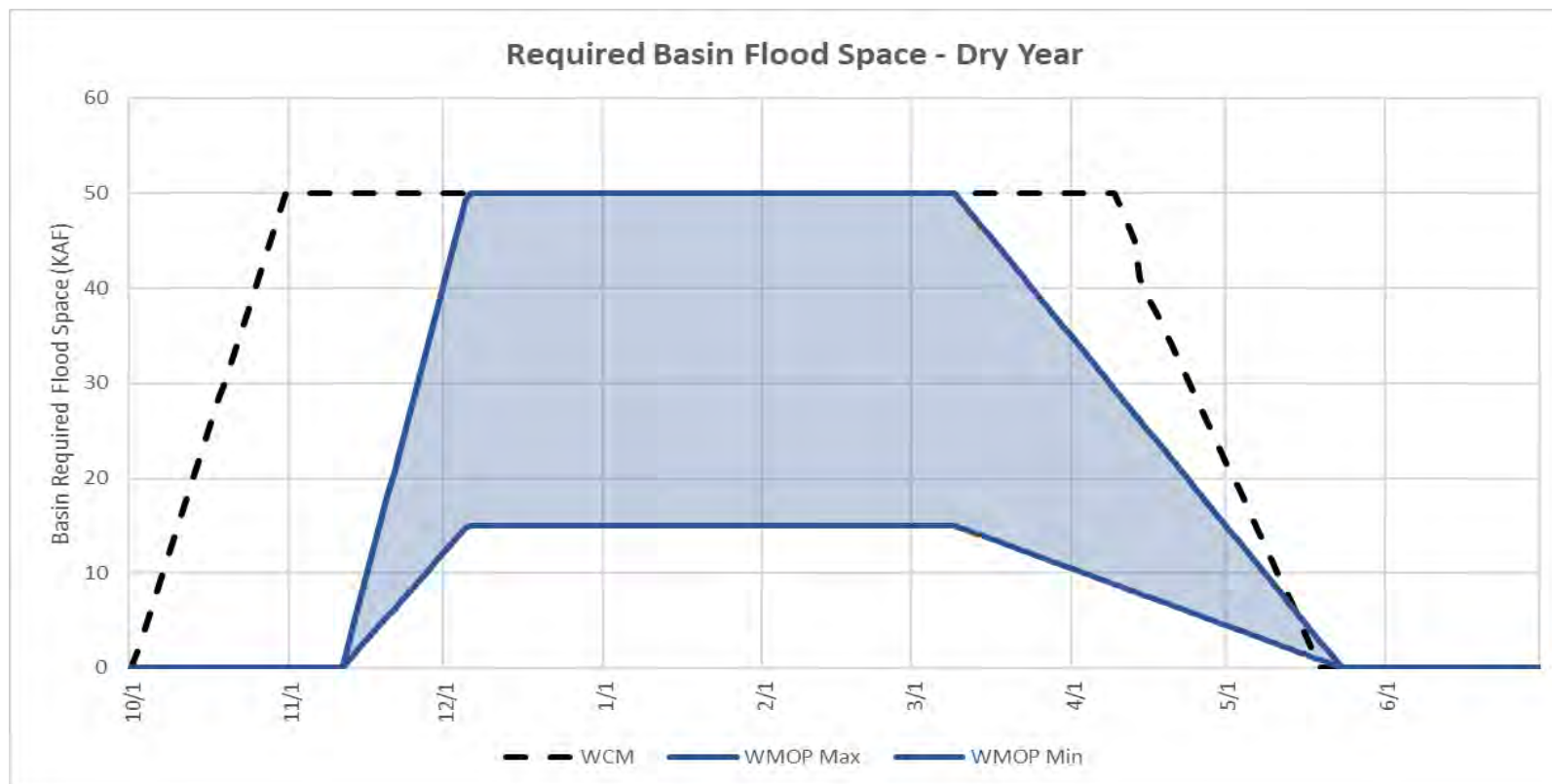
Required Amount of Flood Space *is Variable*

(Depending on Hydrologic Forecast)



Preferred Alternative 6A would have an **extended fall drawdown period**

- *Would start 6 weeks later*



Extended Fall Drawdown Period *Benefits*

- Reservoirs would *remain higher into the fall* months leading to enhanced recreational opportunities
- Reservoir drawdown would *follow a more natural hydrograph* in the fall as water is released improving fisheries habitat
- Retiming or extending the release period *avoids “spilling” or dumping of water when it isn’t needed*
- *Potential for higher river flows in November and December*
- *Additional opportunities for Credit Water Storage operations*
- *Potential* for retention of additional storage which could be carried over into the following year for future use
- *Achieves the same objective for flood protection*

Ability to *Fill Reservoirs Earlier* in the spring

Benefits -

- Allows reservoir refill into the flood space to begin earlier and at a steady rate, and in dry or early years of a drought capture runoff as it becomes available (*store early runoff*)
- In big runoff years, sometimes current rules don't allow filling to begin until June (this is too late in some years)
- Allows for more flexible management of project water for the benefit of Threatened and Endangered species (adaptive management)

Benefits to *TMWA* with Opportunity to Fill Earlier in the Season (as needed) Provides *Operational Flexibility*:

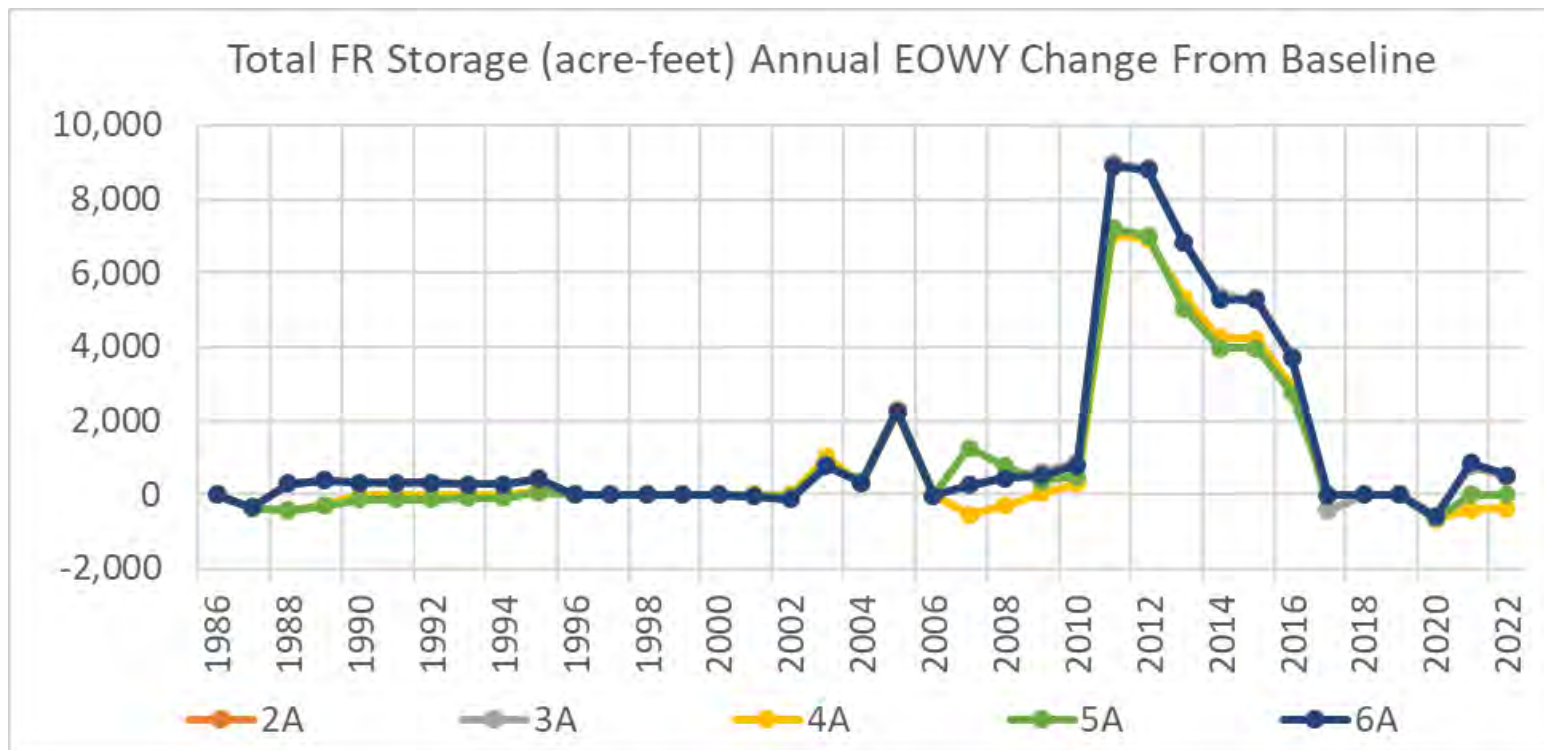
- Ability to capture and store more Floriston Rate water in storage coming into a drought
- Protection against unnecessary spill
- More opportunity to establish Credit Water/Drought Reserves
- Additional carryover capacity

Future Climate Change:

- In the future, runoff is projected to occur earlier in the season with continued warming temperatures in the Sierra Nevada
- The Preferred Alternative provides the flexibility to capture and store that water in a potentially warmer climate for later use

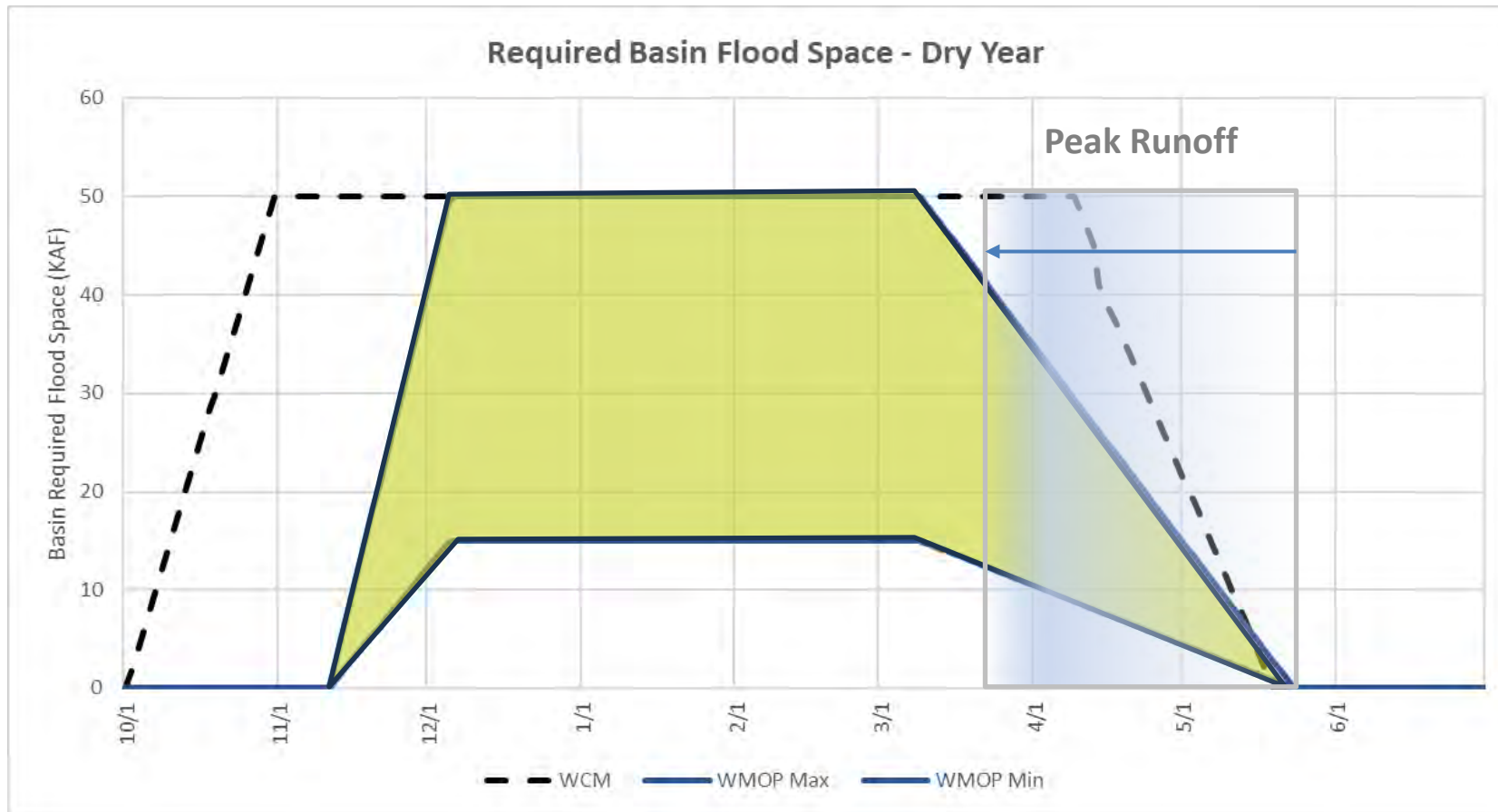
Benefits under Preferred Alternative (6A)

- **Benefit:** Additional FR storage can be captured and stored upstream in early years of a drought (used for maintaining river flows later)



Ability to Fill Reservoirs Earlier in the Spring

(Increases the likelihood of having normal river flows in the future)



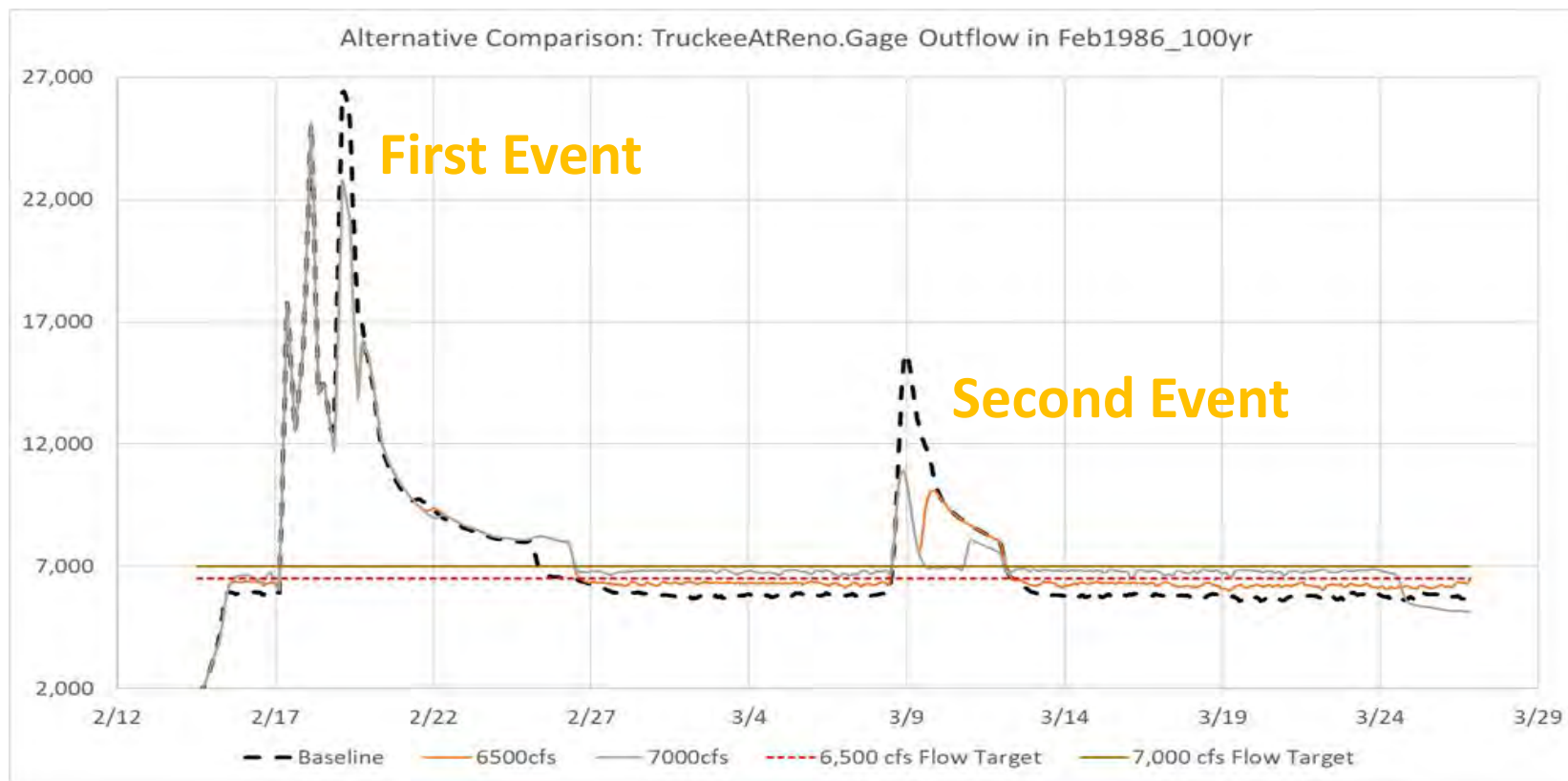
Protection Against Flooding (**Reno/Sparks**)

Simulated Flood Event Improvements Show:

- **Benefit:** *Reduced Peak Discharge* in first and second event
- **Benefit:** Ability to *more efficiently evacuate flood space* in Preferred Alternative due to adjusted flow targets at Reno Gage
- **Benefit:** Less time required to be in flood operations post event

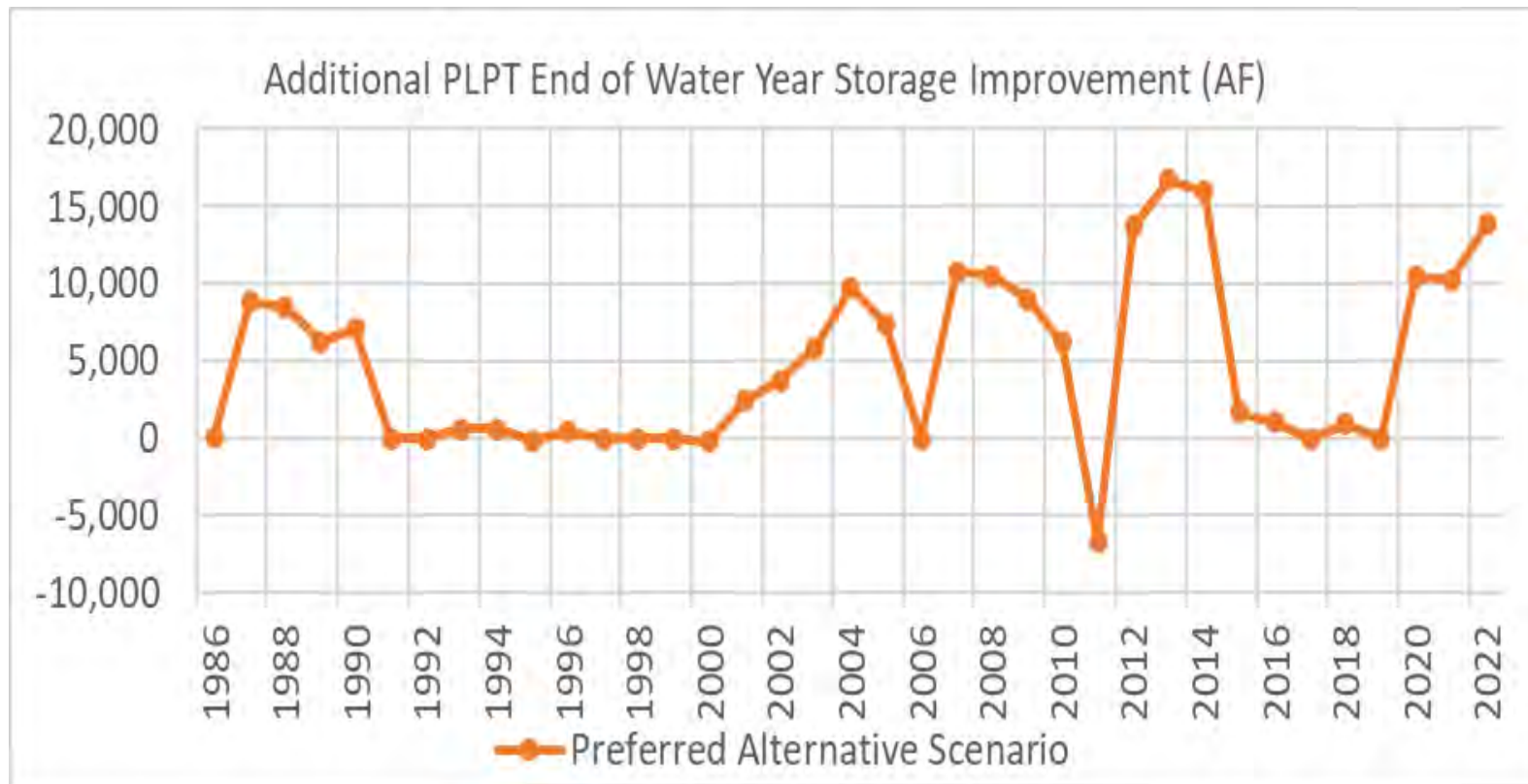
Reno-Sparks Benefits under Preferred Alternative

Benefit: Enhanced Flood Protection



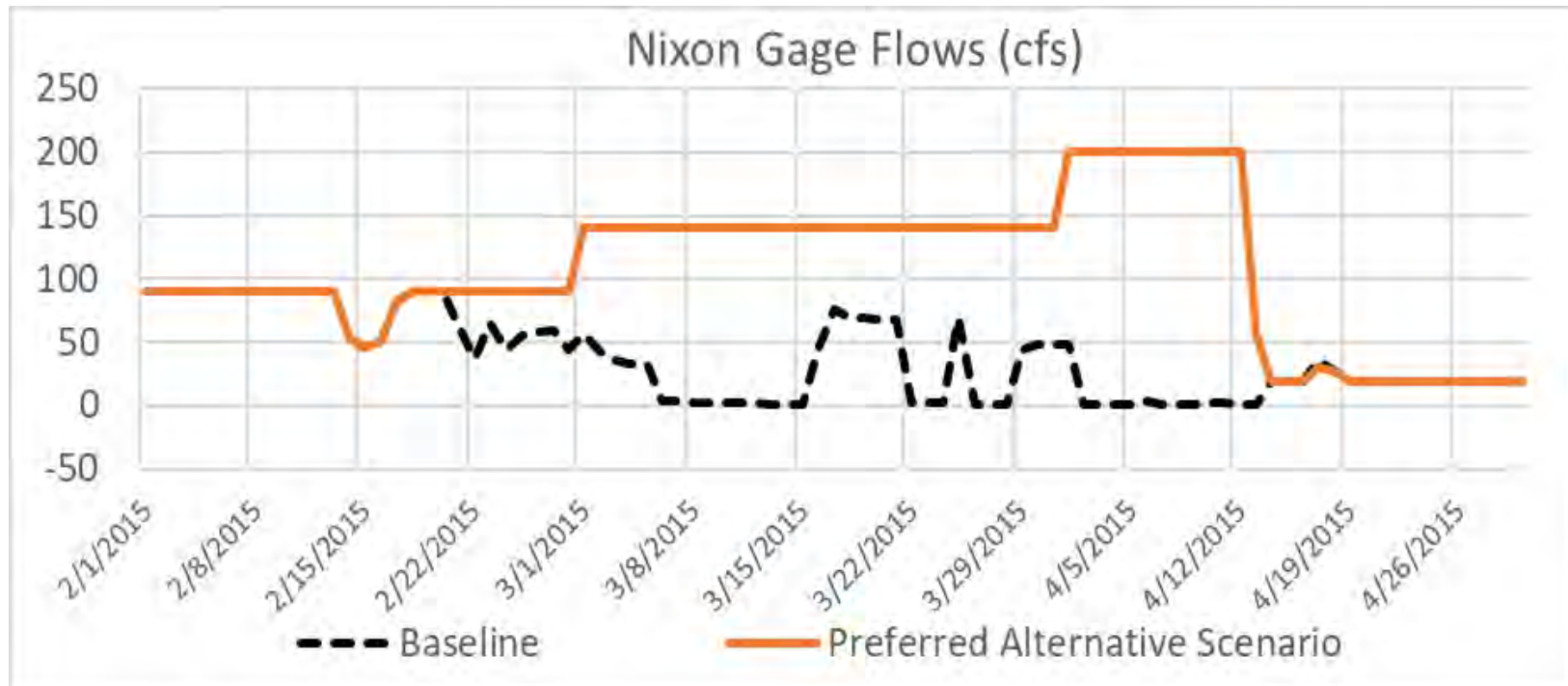
PLPT Benefits under Preferred Alternative

- **Benefit (#1): Additional Storage in the system**



PLPT Benefits under Preferred Alternative

- **Benefit (#2):** Enhanced ability to meet Nixon flow targets in lower river during drought periods



Preferred Alternative 6A

- Will *provide* the *operational flexibility needed* to more effectively manage upstream storage for supply and flood control in the future under climate uncertainty (*adaptively managed*)
- As the amount of *wintertime flood space required will flex* or vary based on revised guide curves and the latest snowmelt runoff forecast and real-time weather projections (FIRO)

Benefits:

- Additional protection against flooding especially through Reno/Sparks (lower peak discharge through town); more effectively evacuate flood space (**TRFMA**)
- **TMWA** - Increased amounts of Floriston Rate water in storage, particularly coming into and through early years of a drought; protection against spill; enhanced opportunities for Credit Water operations; improved carry-over capacity; it provides a mechanism to capture earlier runoff due to a potentially warmer future climate
- **PLPT** - More end of year reservoir storage and more water in lower river for fisheries

Thank you!
Questions?

Bill Hauck, Water Supply Supervisor
Email: bhauck@tmwa.com
O: (775) 834-8111 M: (775) 250-1333



STAFF REPORT

TO: Board of Directors
FROM: John R. Zimmerman, General Manager
DATE: August 7, 2023
SUBJECT: **General Manager's Report**

Attached please find the written reports from the Management team including the Operations Report (*Attachment A*), the Water Resource and the Annexation Activity Report (*Attachment B*), and the Customer Services Report (*Attachment C*).

Since TMWA's last board meeting, TMWA has issued one emergency procurement under NRS 332.112. This emergency procurement, June 16, 2023, totaled \$150,000.00 which was used to secure primary coagulant with our new supplier earlier than expected due to our previous supplier having an emergency which required them to shut down their production plant and made them unable to supply us with our necessary water treatment chemical. We will be paying the same rate with our new supplier and did not experience any interruption of water treatment.

In July, TMWA's Verdi Hydroelectric Plant was inducted into the Hydro Hall of Fame for 2023. Since 1995, 66 legacy hydropower plants worldwide have been inducted. The award recognizes achievements in renewable power, emission-free generation and reliability. Cameron Shultz, Hydro Foreman, and Aidan McNerney, Power Generation Technician, were present at the HYDROVISION International Conference to accept the award on behalf of TMWA. The entire hydro team goes above and beyond daily to ensure all three hydropower plants run as efficiently and smoothly as possible. We are extremely proud and humbled by this recognition. The award was also included in August's bill insert to customers (see attached.)

Also, listed below are news clippings from June 16 through August 7, 2023:

- 06/29/23 [Forever Chemicals Confirmed at Multiple North Valleys Locations: What We Know](#) ThisisReno
- 06/25/21/23 [Tahoe Stewardship Plan Introduced to Address Tourism Challenges](#) Sierra Sun
- 06/25/23 [The Truckee River is Wide Open for Rafting Adventures](#) SFO Standard
- 06/27/23 [From Water Use to Heat Islands, Legislatures Mixed Bag of Environmental Bills](#) LVRJ
- 06/29/23 [DRI To Receive \\$1.2 Million for Nevada Cloud Seeding](#) Las Vegas Weekly
- 07/09/23 [Legendary Clarity is Returning to Lake Tahoe](#) Chico Enterprise Record
- 07/09/23 [Reno is Breaking New Ground in Wastewater Recycling](#) KUNC-Northern COLO
- 07/06/23 [Reno Project Successfully Turns Wastewater into Drinking Water](#) Waste 360
- 07/06/23 [Reservoirs Are an Important Part of Water Delivery System](#) Nevada Business Magazine
- 07/07/23 [Reno's Breaking Ground on New Wastewater Recycling](#) Wyoming Public Radio
- 07/11/23 [Tips to Protect Lawns Ahead of Heat Wave](#) KOLO TV
- 07/11/23 [TMWA Meets All Water Quality Standards](#) KRNV
- 07/16/23 [Opinion: Preserving Lake Tahoe Takes a Village and a Great Plan \(Alexis Hill\)](#) RGJ
- 07/24/23 [Nevada Water Innovation Institute to Host Water Experts July 26-28](#) Nevada Today
- 07/25/23 [Pyramid Lake Tribe Sues Over Water Rights to Protect Endangered Fish](#) Nevada Current
- 07/23/23 [SB99 Funds Statewide Cloud Seeding Initiative](#) DRI
- 07/28/23 [How Cloud Seeding is Giving Boost to Nevada Water Supply](#) LVRJ
- 07/30/23 [Taking a deep dive into Lake Tahoe: Tahoe Environ. Research Center](#) Tahoe Daily Tribune
- 08/01/23 [Why Nevada Water?](#) Nevada today
- 08/01/23 [\\$3 Million Going Toward Truckee River Improvements](#) KTVN
- 08/04/23 [County Truckee Meadows lands Bill to get Congressional Vote](#) ThisisReno

HISTORIC VERDI HYDROELECTRIC POWER PLANT INDUCTED INTO THE HYDRO HALL OF FAME

TMWA's Verdi Hydroelectric Plant, distinguished by its long service life and reliable production of electricity, was inducted into the Hydro Hall of Fame for 2023. The Hydro Hall of Fame recognizes extraordinary achievement, with an emphasis on long-lasting facilities. Since 1995, 66 legacy hydropower plants worldwide have been inducted for their renewable power, emission-free generation and reliability.

The Hydro Hall of Fame awards were presented in July at the HYDROVISION International Conference in Charlotte, North Carolina. Each year, information on 100+ historic hydro facilities are reviewed before choosing inductees.

The Verdi plant, located on the Truckee River, was constructed in the early 1900s to supply electricity to Virginia City and its mines. It is a run-of-river plant and, combined with TMWA's other two hydro plants, eliminates more than 90,500 pounds of carbon dioxide emissions daily when all are running at capacity. Technological upgrades over the years have made management more efficient, but the turbines are original to the project.



“TMWA's hydroelectric plants are one of the crown jewels in Northern Nevada's green-energy portfolio,” said Andy Gebhardt, TMWA's Director of Distribution Maintenance and Generation. “Hydro power has also been a significant help in offsetting our costs over the years, helping to keep rates lower for our customers.”

TMWA is proud to offer tours of this exceptional and historic plant annually in August and September. See the separate insert in this mailing.

WHAT TO DO IF YOU SEE WATER BEING WASTED

TMWA is dedicated to helping our customers prevent unnecessary waste. In most cases, people are unaware that they have a broken pipe or a misdirected sprinkler head. If you see water being wasted, please call our Conservation Department at (775) 834-8005. If the location is within TMWA's service area, our conservation consultants will reach out and offer advice on how to fix the problem. For additional water and money-saving tips, please visit tmwa.com/consERVE.

WHERE TO CALL

- GENERAL INQUIRIES 775-834-8080
- EMERGENCY REPAIR 775-834-8090
- WATER CONSERVATION 775-834-8005
- WATER QUALITY 775-834-8118
- WATER RIGHTS 775-834-8029
- OMBUDSMAN 775-848-0813

EVENTS AND PUBLIC MEETINGS

TOURS OF VERDI HYDROELECTRIC PLANT & CHALK BLUFF TREATMENT PLANT
FOR AUGUST AND SEPTEMBER, SEE SEPARATE INSERT.

TMWA BOARD OF DIRECTORS MEETING
SEPT. 20, 10:00 A.M.—NOON.

Please RSVP for tours and find details for all workshops and meetings at tmwa.com/meeting.



Truckee Meadows Water Authority is a not-for-profit, community-owned water utility, overseen by elected officials and citizen appointees from Reno, Sparks and Washoe County. TMWA employs a highly skilled team who ensure the treatment, delivery and availability of high-quality drinking water around the clock for more than 440,000 residents of the Truckee Meadows.





STAFF REPORT

TO: Board of Directors
THRU: John R. Zimmerman, General Manager
FROM: John Enloe, Director Natural Resources
BY: Bill Hauck, Water Supply Supervisor
DATE: August 7, 2023
SUBJECT: August 2023 Water Operations Report

SUMMARY

- The water supply outlook for our region could not be better than it is right now.
- Lake Tahoe made a significant recovery and came within inches of filling.
- All other reservoirs on the Truckee system filled completely.
- Normal river flows can be expected for the next two to three years.
- Lake Tahoe storage is currently @ 84% of capacity (5.10' feet above the rim).
- Total combined Truckee River reservoir storage is ~88% of capacity.
- TMWA's upstream reserve storage is also in great shape between Donner and Independence reservoirs, and water stored under the terms of TROA (~38,351 AF).
- Customer demand averaged 131 MGD through the first week of August.
- Hydroelectric generation for July was 4,973 MWh, with a revenue of \$377,783.

(A) Water Supply

- **River Flows** - Truckee River discharge at the CA/NV state line was about 625 cubic feet per second (CFS) this morning. This is slightly above normal for this time of the year, as the 114-year median flow for this day at Farad is ~ 525 CFS.
- **Reservoir Storage** - Overall Truckee River reservoir storage is ~88% of capacity. The elevation of Lake Tahoe is 6228.10 feet (~1.0' from full). Storage values for each reservoir as of August 7th are as follows:

Reservoir	Current Storage (Acre-Feet)	% Capacity (Percent)
Tahoe	621,600	84%
Boca	37,137	91%
Stampede	225,946	100%
Prosser	27,699	93%
Donner	9,384	99%
Independence	17,503	100%

In addition to the 26,884 acre-feet of storage between Donner and Independence reservoirs, TMWA also has about 11,467 acre-feet of water stored between Stampede and Boca reservoirs under the terms of TROA. TMWA’s total combined upstream reservoir storage as of this writing is 38,351 acre-feet.

- **Outlook** - The 2023 water year will go down in the record books as being one of the biggest on record in terms of both snowpack and runoff. Lake Tahoe, which started out the year a half a foot below the rim, rose almost six feet between the months of December and July, coming within inches of refilling. And all the other reservoirs on the Truckee River system filled completely this year. Many of these reservoirs are still completely full, and a significant amount of this storage will be carried over into the winter. This will help to provide a cushion should a drier year occur next winter. Normal river flows are now projected for the next two to three years, and the regional water supply outlook really could not be much better than it is right now.

(B) Water Production

- **Demand** - Summer is in full swing and customer demands are at seasonal highs. Customer demand averaged one hundred thirty-one (131) million gallons per day (MGD) through the first week of August. Surface water made up 84% of the supply, and groundwater pumping the other 16%.

(C) Hydro Production

Generation - The average flow in the Truckee River at Farad (CA/NV state line) during the month of July was 670 CFS. All three hydroelectric plants were on-line all month and available 100% of the time.

Statistics and estimated generation for the month as follows:

Plant	Generation Days	% Availability	Generation (Megawatt Hours)	Revenue (Dollars)	Revenue (Dollars/Day)
Fleish	31	100%	1,870	\$142,413	\$4,594
Verdi	31	100%	1,691	\$127,649	\$4,118
Washoe	31	100%	1,412	\$107,721	\$3,475
Totals	93	-	4,973	\$377,783	\$12,187



STAFF REPORT

TO: Chairman and Board Members
THRU: John R. Zimmerman, General Manager
FROM: Eddy Quaglieri, Water Rights Manager
DATE: August 16, 2023
SUBJECT: **Water Resources and Annexation Activity Report**

RULE 7

Rule 7 water resource purchases and will-serve commitment sales against purchased water resources through this reporting period:

Beginning Balance		2,965.04 AF
Purchases of water rights	459.16 AF	
Refunds	0.00 AF	
Sales	-32.64 AF	
Adjustments	0.00 AF	
Ending Balance		3,391.56 AF

Price per acre foot at report date: \$7,900

FISH SPRINGS RANCH, LLC GROUNDWATER RESOURCES

Through the merger of Washoe County's water utility, TMWA assumed a Water Banking and Trust Agreement with Fish Springs Ranch, LLC, a subsidiary of Vidler. Under the Agreement, TMWA holds record title to the groundwater rights for the benefit of Fish Springs. Fish Springs may sell and assign its interest in these groundwater rights to third parties for dedication to TMWA for a will-serve commitment in Areas where TMWA can deliver groundwater from the Fish Springs groundwater basin. Currently, TMWA can deliver Fish Springs groundwater to Area 10 only (Stead-Silver Lake-Lemmon Valley). The following is a summary of Fish Springs' resources.

Beginning Balance		7,412.82 AF
Committed water rights	- 1.86 AF	
Ending Balance		7,410.96 AF

Price per acre foot at report date: \$45,753.75 (SFR and MFR); \$39,690 (for all other services)¹

¹ Price reflects avoided cost of Truckee River water right related fees and TMWA Supply & Treatment WSF charge.

WATER SERVICE AREA ANNEXATIONS

Since the date of the last report, there have been 40.5 acres (Exhibit A & B) annexed into TMWA's service area.

INTERRUPTIBLE LARGE VOLUME NON-POTABLE SERVICE

No new ILVNPS customers have been added during this reporting period.

EXHIBIT "A"

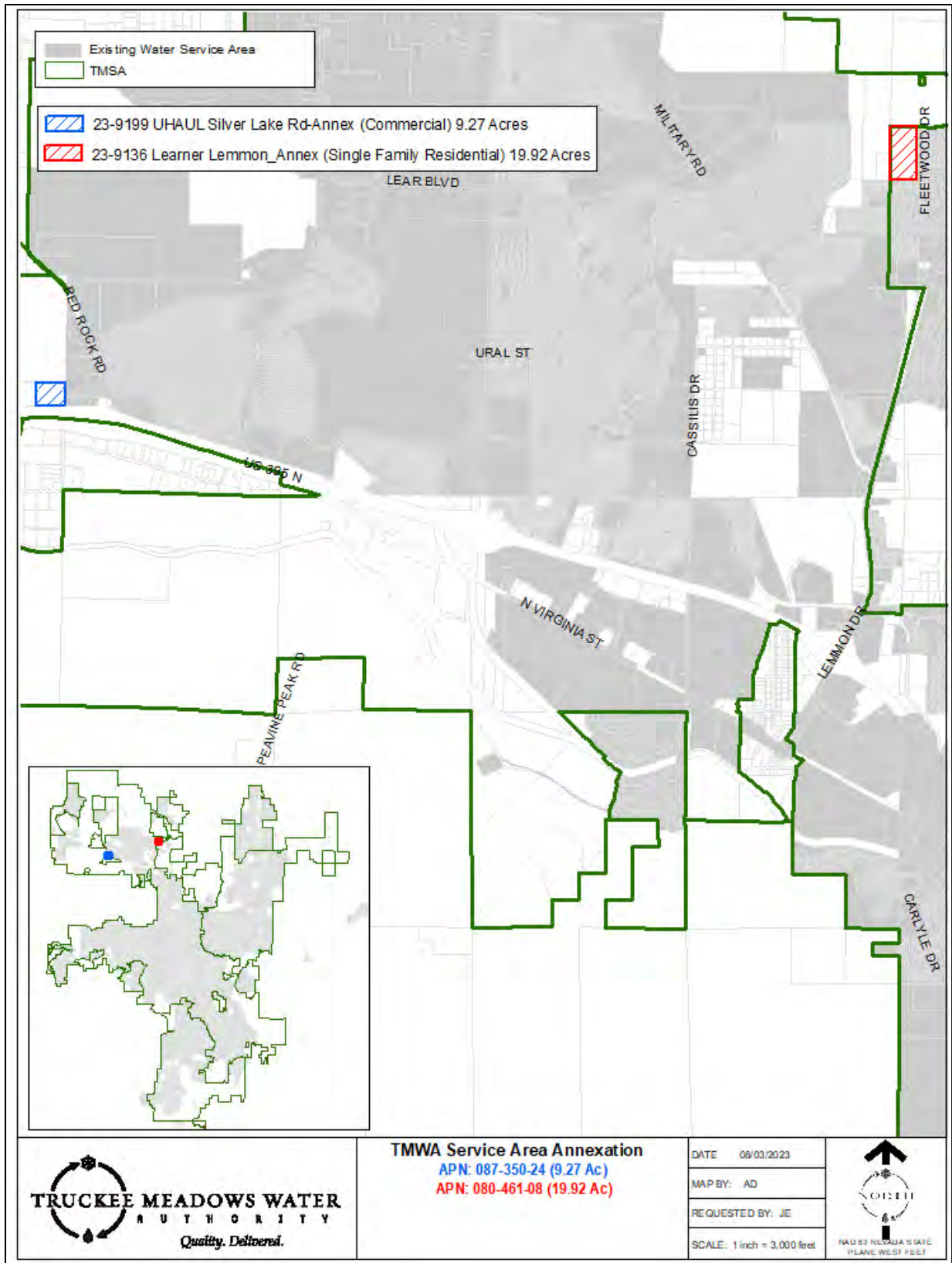
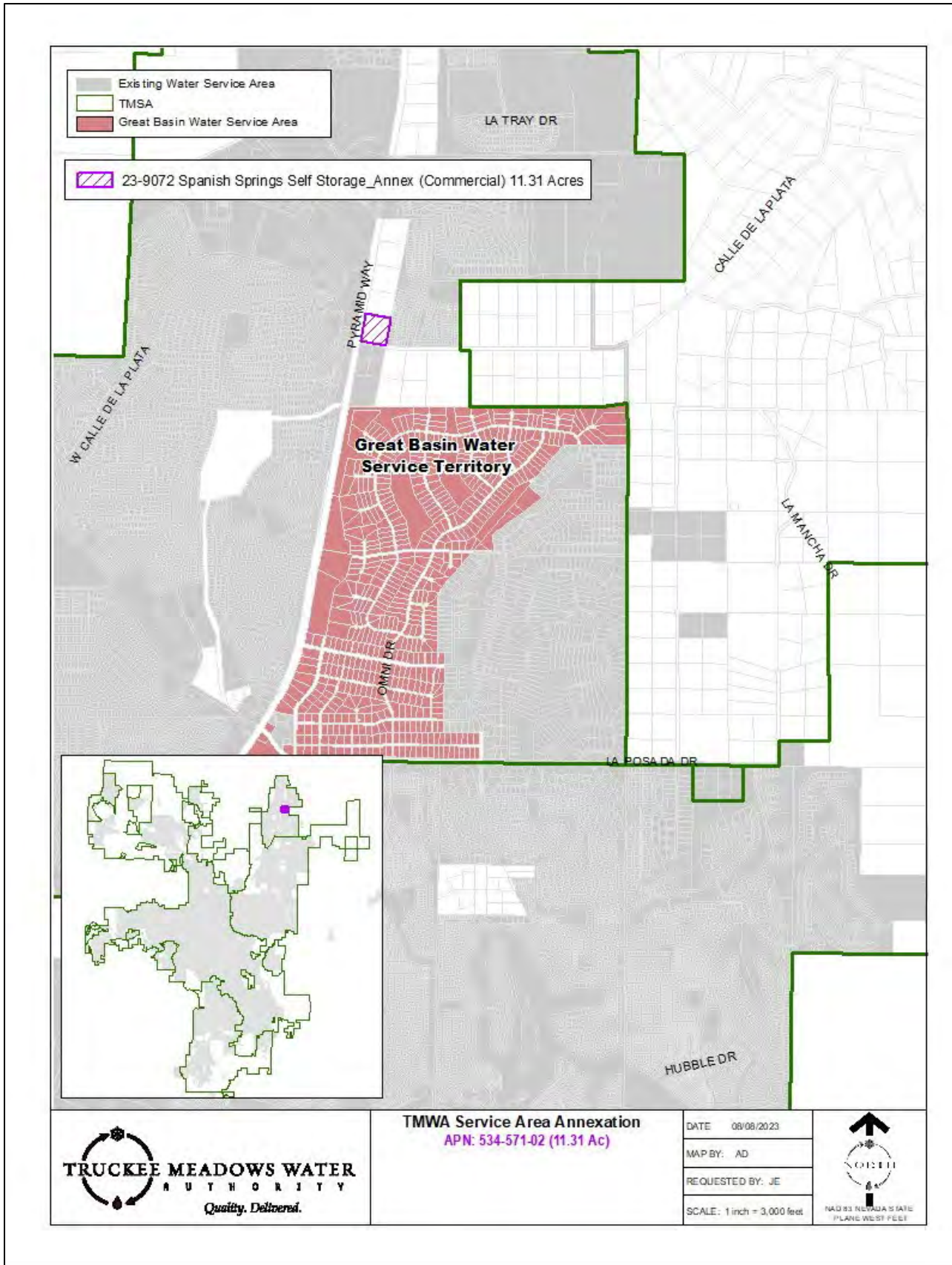


EXHIBIT "B"





STAFF REPORT

TO: Board of Directors
THRU: John R. Zimmerman, General Manager
FROM: Marci Westlake, Manager Customer Service
DATE: August 16, 2023
SUBJECT: **June & July Customer Service Report**

The following is a summary of Customer Service activity for June and July 2023

Ombudsman – Kim Mazeres

- Meter issue. Servicemen replaced water meter and reading device. Both April and May bills were high. Customer could not figure out the phone tree so they called the Ombudsman. Unknown when usage went through meter, staff worked with the customer on bill.
- High Bill. Closed on house in March. First bill \$37, second bill \$22, and third bill \$325. Same meter reads for March and April bills. Equipment was not working correctly and TMWA adjusted the bill.
- Call from a person whose patient's water is off and wanted to know if we have any assistance available. Electric power was off, not water, for a cancer patient. We could not help them.
- Customer called and was frustrated with TMWA. We had been out several times looking for a meter that needed to be changed out. The Ombudsman was called and was not able to leave a message because the mailbox was full.

Communications – Public Outreach – June & July

- Lauren K., Shannon G., and Vicki K. were all at Kid's Free Fish Day at the Sparks Marina about 45 people stopped by the booth.
- Ryan M., Stephanie M., Kayla D., & Maya HG. were at Water Palooza at Katherine Dunn Elementary School for Water Quality and 450 kids attended.
- Robert C. and Angel L. were at Water Palooza at Katherine Dunn Elementary School and demonstrated how to build a filter for 450 kids.
- Lydia T. had a presentation for WetLab at American Flat and 30 people attended.
- Kara S. presented at the AWWA conference on Protecting Source Water through Collaborative Partnerships and 25 people attended.
- Cameron Shultz accepted the Hydro Hall of Fame Award at the Hydrovision conference. 300 people were in attendance.
- Kara Steeland had a WTP Tour at Chalk Bluff for 4 people.

Conservation (2023 Calendar year)

- 679 Water Usage Reviews
- 2,907 Water Watcher Contacts

Customer Calls – June & July

- 14,614 phone calls handled.
- Average handling time 5 minutes 12 seconds per call.
- Average speed of answer :18 seconds per call.

Billing – June & July

- 274,268 bills issued.
- 41,109 customers (30%) have signed up for paperless billing to date.

Remittance – June & July

- 33,680 Mailed-in payments.
- 47,663 Electronic payments
- 102,074 Payments via AutoPay (EFT)
- 30,731 One-time bank account payments
- 242 Store payments
- 1,307 Pay by Text
- 8,997 IVR Payments
- 1,312 Reno office Payments
- 40 Kiosk Payments

Collections – June & July

- 27,514 accounts received a late charge.
- 6,075 Mailed delinquent notices, 0.02% of accounts.
- 1,041 accounts eligible for disconnect.
- 875 accounts were disconnected. (Including accounts that had been disconnected-for-non-payment that presented NSF checks for their reconnection)
- .10% write-off to revenue.

Meter Statistics – Fiscal Year to Date

June

- 7,519 Meter exchanges completed.
- 1,675 New business meter sets completed.

July

- 677 Meter exchanges completed.
- 186 New business meter sets completed.